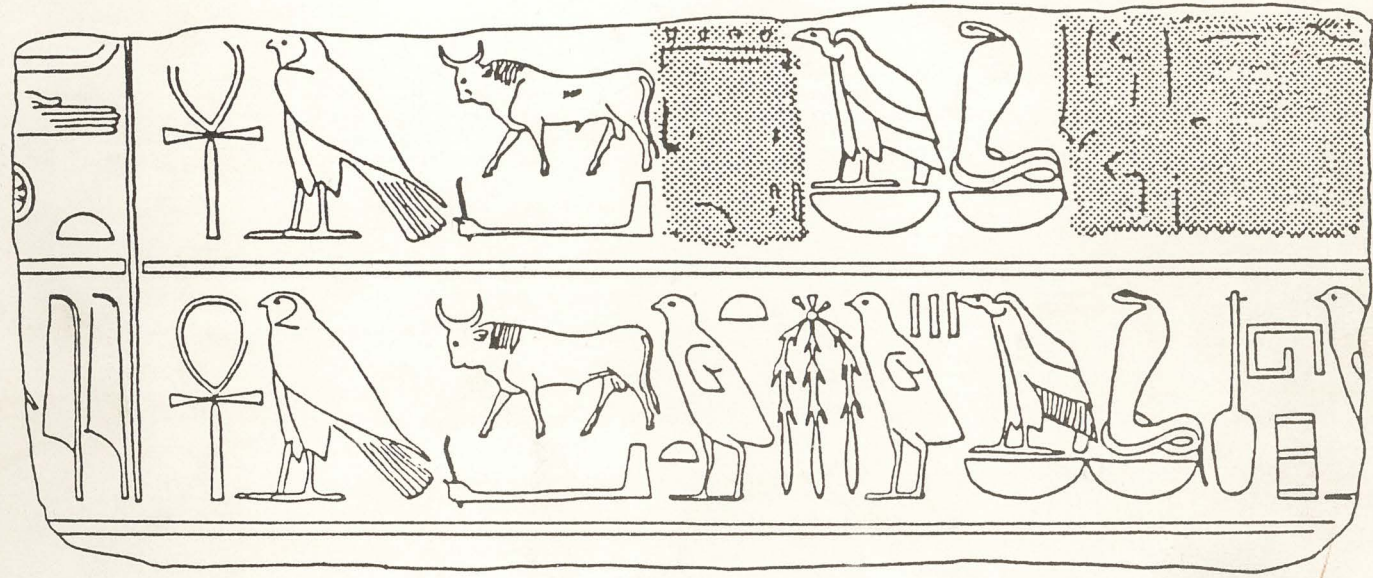


AMERICAN RESEARCH CENTER IN EGYPT

# NEWSLETTER



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Cover: Two lines of text from an architrave block,  
Tutankhamun-Ay Shrine at Karnak





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THE BEGINNINGS OF MODERN ARABIC LITERARY CRITICISM

The point of departure of this project was the realization that there already were fairly adequate studies of Arabic literary criticism in the twentieth century, but far fewer about the nineteenth. It was clear in what direction the thoughts of critics must have moved, but I deemed it worthwhile to locate precisely the turning points at which new concepts were born and new values recognized.

To make the best possible use of my time, I bought all the relevant books on the market, and sent these on to my New York address to be read at leisure; while in Egypt, I spent most of my time examining books and old journals found in the National and other local libraries. It follows that my research is not complete. I am confident nevertheless that a picture of literary thought in the nineteenth century can already be drawn at least in its main lines, with details to be filled in later.

One must start with the standards that prevailed at the end of the eighteenth century. By then, both poetry and prose had come to consist of ornate repetitions of conventional themes. One branch of Rhetoric, that of *badi'* (dealing mainly with the ingenious games that could be played with words) had been so amply elaborated that the eighteenth century scholar <sup>C</sup>Abd al-Ghanī an-Nābulī identified some 170 tropes coming under its heading. Theoretical criticism had virtually ceased to exist, in that thinkers were not even seeking new aesthetic discoveries, and practical criticism consisted either of blanket praise of some poet or of line-by-line commentaries in which the slightest deficiencies in language or in rhetorical accomplishments were picked out.

Arab modernists now look upon the practices prevailing then as mere toying with words. A kinder view may be that the style was genuinely expressive of the concerns and priorities not of an entire society, but of a small elite of highly educated scholars entirely at one in, and satisfied with, the values they had inherited.

Yet beginning with the Bonaparte expedition to Egypt in 1798, and with increasing vigor throughout the nineteenth century, European nations were forcing themselves on the Arab world, and the Arabs -- while resisting this interference -- perceived that their best counter was to acquire the techniques and sciences that gave the West its power. The resulting changes in Arab life were far-reaching.

Conscious changes in literary values were, however, comparatively slow to come, and this for two principal reasons. The first was



that Arabs had long come to take such pride in their language and its attendant literary heritage that they showed little inclination to take other people's standards into account. The second is that whenever two cultures interact, it is practices of immediate material benefit that are taken over first, and abstract aesthetic perceptions last.

The first manifestation of an awareness of a different literary tradition is found in the writings of Rifā<sup>c</sup> a Rāfi<sup>c</sup> at-Tahtāwī, an outstandingly open-minded scholar, capable of great independence of thought. Although not primarily interested in literature, he had valid distinctions to make between Arab and French literary criteria. His were, however, clinically objective observations, which left him unshaken in his attachment to the values on which he had been brought up.

In going even as far as he did, he appears to have been ahead of his time, for an entire generation elapsed before his son <sup>c</sup>Alī Fahmī published -- in 1875, in Rawdat al-Madāris -- a short article purporting to review the poetry and music of all the nations of the earth. Needless to say, it is a haphazard collection of unsupported generalizations, indicative not of familiarity with the subject, but of the opposite.

Worthier of notice was the publication -- only a year later, and in the same journal -- of a free translation in verse, by Muhammad <sup>c</sup>Uthmān Jalāl, of the first part of Boileau's "Art of Poetry". This, however, consists mainly of advice to the would-be poet to seek the opinion of candid friends rather than flatterers on his efforts. It does not raise any basic issue, nor does it appear to have had a noticeable effect.

Indeed, as late as in 1885, such a book as Shākir al-Batlūnī's Dalīl al-Hā'im fī sinā<sup>c</sup>at an-nāthir wa n-nāzim was merely echoing the works of Ibn al-Athir, Ibn <sup>c</sup>Abd Rabbih, and Ibn Khaldūn.

Yet already in 1870 the journal az-Zahra had noted that young men were turning away from Arabic to European writings; but it did no more than condemn them for this.

What such critics failed to take into account was that a new generation of readers had risen, which -- unlike the previous elite -- was not steeped in a unified culture but consisted of lawyers, doctors, Army officers and the like, who owed their success to the mastery of some Western technique and were eager to know more.

To serve such readers, two new forms of writing had in fact emerged.

Some poets, headed by al-Bārūdī, had sensed the futility of regurgitating accepted notions when great issues were being played

out; but poetry has such deep roots in Arab consciousness that they instinctively sought inspiration neither from the West nor from the immediate past, but from earlier, dynamic Arab models. Keeping pace with them was the most perceptive critic of the age, Husayn al-Marsafī, whose al-Wasīla l-adabiyya had the same framework as many other such didactic works, but based its judgments on more vital writings than had hitherto been recognized. Poetry thus managed to renovate itself without straying from its native tradition.

Among prose writers, however, a different development took place.

Although ornate prose continued to be favored in maqāmas and risālas, a trend towards a more direct, functional style can be detected in travelers' accounts, in the new narrative genres for which there was no strong tradition in the Arab past, and above all in the journals which addressed themselves not to the few but to as many as could read or be read to. The change is strikingly illustrated by <sup>c</sup>Abd Allāh an-Nadīm, a master of the old style who, in a succession of papers he launched, resorted to forms of words as close as possible to the colloquial, and sometimes to the colloquial itself.

The new style does not appear to have come about as a result of a calculated, clear-sighted revolution in literary values. Even its best exponents continued to use rhymed prose at least in the title and introduction of their works, as if to prove that they were capable of it. And Ahmad Fāris ash-Shidyāq wrote nine chapters of his as-Sāq<sup>c</sup>alā s-Sāq fīmā huwa l-Fāriyāq in rhymed prose before suddenly exclaiming that "rhymed prose is to a writer what a wooden leg is to a walker".

Correspondingly, no contemporary critic appears to have faced up to the question: Is this new style good or is it merely a necessity of writing for the market?

Indecision on this issue remained even with Jurjī Zaydān, who founded al-Hilāl in 1892. What little poetry figured in early numbers of his journal conformed with past standards. Regarding prose, too, he declared that a simple style was unacceptable in maqāmāt and orations. At the same time, he favored simple language in narratives, and he justified this by virtually taking the novel out of the realm of artistic writing, inconsistently classing it now as history and now as mere entertainment.

Nevertheless, it is in the first year of the same al-Hilāl that we encounter a short article by Niqūla Yūsuf Fayyād which lays down a new order of priorities for the writer, giving pride of place to new ideas and unequivocally declaring a simple style to be "more natural, freer of disruptive artificiality, and more widely applicable" than an ornate one. It is, however, a dogmatic assertion of the writer's preferences: It does not argue its



case, makes no revealing comparisons, and cites the example of only two masters, Racine and Bossuet. Nor does it raise any basic literary issue.

We are on the very threshold of the twentieth century, before such an issue is brought forward. Visiting the Paris exhibition in 1900, Muhammad al-Muwaylihi was so impressed with the paintings and sculptures he saw there that he was moved to exclaim: Depiction is silent poetry, and poetry is spoken depiction. He did not elaborate, but he had linked two art forms extending beyond the confines of Arab culture. And a few months later, he wrote a seminal article on the essence of poetry in which he broke away from former formal definitions, and declared poetry to be the manifestation of a faculty common to all men, the outworkings of which create the illusion of the intervention of an outside force which the Greeks identified with the Muses, and the Arabs with the daemons pertaining to each poet.

By so linking two traditions, he implied that the poetic experience could not be bounded by the conventions of any one culture. The door was opened for any nation to benefit from the perceptions of any other, and soon the likes of Taha Husayn and al-Aqqad were using the precepts and examples of European critics to become the spearheads of innovation -- but with these we are will into the twentieth century.

Pierre Cachia  
ARCE Fellow 1982  
Funded by the U.S. Information Agency

## RECENT DEVELOPMENTS IN THE SHARI'A LAW OF EGYPT AND THE SUDAN

As an ARCE fellow during 1982-83 I had the opportunity to examine questions of Islamic law, Shari'a, especially as it relates to family law in Egypt. My perspective was a comparative one since I had conducted similar research in the Sudan during 1979-80 while on sabbatical leave from Rhode Island College.<sup>1</sup> During the year of residence in Cairo, the Sudan and Egypt signed formal agreements declaring their intention to unite the two countries, so the implications of this comparative study became more interesting during the actual course of the research period.

Of course, the Sudan and Egypt have been linked historically and politically since Pharonic times, albeit not always on the most equitable of terms. Egypt and the Sudan were ruled jointly during the era of British colonialism and Condominium rule. Likewise the introduction of formal Shari'a in the Sudan in part came by way of Egypt with Muslim scholars from Al-Azhar who came to Sinnar, the capital of the first Muslim kingdom of the Sudan, the Funj in the 16th century. Another wave of influence came during the 19th century with the Turco-Egyptian invasion of the Sudan and conquest by the armies of Muhammed Ali after some years of resistance. A judicial apparatus applying Turkish Hanafi law<sup>2</sup> was put into place which shaped the development of Islamic law in the Sudan as it had already influenced the development of Shari'a in Egypt some three centuries earlier. The Turkiya, as it is known in Sudanese history, shaped 19th century politics and law in the country, except for the period of independent Mahdist rule, 1884-98, during which time Islamic law was applied by the Mahdi and his successor, the Khalifa, solely on the basis of the Qur'an and Sunna, without any reference to any particular school of law.

The same Hanafi law had been introduced after the Ottoman conquest of Egypt in the early 1500's, although this school of law is not indigenous either to the Sudan or Egypt. Indeed, one of the great jurists and founder of one of the four madhabs (schools) of Islamic law, the Imam al-Shafi'i, taught in Egypt and is buried in Cairo's City of the Dead. Shafi'i law is customary in lower Egypt, while Maliki law prevails in upper Egypt, and today each is still dominant with respect to the performance of religious ritual, although Hanafi law has become the official state law. The Sudan, influenced more by Sahelian West African Islam, follows Maliki rites, as is characteristic of Islamic Africa. Unlike Egypt, the Maliki foundation in the practice of Islam has had considerable influence on the contemporary development of Shari'a in the country. Developments in Egyptian law have drawn from a variety of sources, including the prestigious 'ulama of Al-Azhar University who have taken their inspiration from the Hanafi, Shafi'i and Maliki texts.



Recent developments in the Sudanese family law affecting marriage and divorce have been directly influenced by Mālikī legal principles. For example, although the Hanafī interpretation of consent in Muslim marriage (wilāya fi zowaj) was in force requiring only the final consent of the woman, the prevalence of Mālikī custom that the marriage guardian of the woman (al-walī) have the final authority in contracting the marriage was recognized as legitimate in 1933. Only after pressure from organized women's groups in the wake of the post-independence political upsurge was the Hanafī Principle restored in the 1960's. However, Sudanese custom re-asserted itself with a number of legislative acts between 1970 and 1972 which "clarified" the meaning of consent in marriage by a woman, whereby consent may be indirectly stated, through a smile and silence in response to the question of the acceptability of marriage partner and the amount of the dower (mahr).

Building upon the Mālikī interpretation that demonstrated cruelty in marriage is harmful and unacceptable to women, and is therefore a ground for divorce, the Sudan has been in the forefront of legal change with respect to divorce because of cruelty (talāq al-darar). The Sudan was the first country to introduce divorce because of cruelty in the Muslim world in 1916, and Egypt followed suit in 1921. In the 1970's the Sudan took the further step of incorporating into its law novel interpretation of what is meant by cruelty. These changes were introduced by means of Judicial Circulars which have been issued from the Office of the Grand Qadi since 1902 until 1980 when the office was eliminated.<sup>3</sup> As a result, legal divorce can be granted to a woman not only because of physical abuse, but mental cruelty as well, insulting behavior on the part of the husband, for instance, even on a single occasion if the insult is serious enough. Further, a woman can in effect "ransom" her way out of an abusive marriage by legally proffering a sum of money (fidya) to the husband, which when accepted (and this can be ordered by the judge), the husband is bound to divorce the wife in court. These innovations have taken place wholly within the structure and philosophy of the Shari'a, derived from Mālikī and Hanafī sources.

While Egyptian law has been applied more consistently within the Hanafī madhab, inspiration for certain legal innovations has been drawn from Mālikī sources, as in Sudan. The concept of wilāya or consent in marriage in Egypt is essentially Hanafī in that consent rests with the woman herself, however that power of consent is recognized legally only after the age of 21, and only if the woman contracts an acceptable marriage, i.e. with one who is her social equal including an adequate amount of dower or mahr. Prior to this age, the customary wilāya rests with the marriage

guardian, the walī, who is the woman's father or a close male agnate or, failing these, a Shari'a judge. Thus the customary protection of the female in marriage and the assertion of the strength of the agnatic kin in marriage is still very strong in law and in practice in the Nile Valley.

The 1979 change in Egypt in the interpretation of divorce because of cruelty of harm (darar) in marriage took place on the ground that it is a harm to the woman if her husband takes a second wife without her permission. This is clearly drawn from the Maliki inclusion of harm caused to the wife being a ground for divorce, but it is a novel interpretation. It has been interpreted as a partial ban on polygyny, and thus is consonant with recent developments in Iran, India and Pakistan which give the first wife the right to legal divorce if the husband married a second time without her knowledge. Only Tunisia (1957) and Peoples Democratic Yemen (1974) have abolished polygyny entirely. Some Egyptian jurists have taken issue with this innovation in the law and have debated its constitutionality and its justification within the spirit of Islam. Other jurists and practitioners of the law accept as normal a certain amount of darar in a marriage, and greatly prefer the tolerance of the smaller unpleasantness of harm caused to a woman to the more severe consequences of divorce, especially of a woman with small children and without visible means of support.

Those who have criticized the legal ban on second marriage without the permission of the first wife have taken up the question as a matter for interpretation by the Egyptian constitution. A case challenging the constitutionality of the 1979 law has been lodged in the Supreme Court in 1983 saying, in effect, that since the source of Egyptian legislation is to be Shari'a as of 1980 (cf. article on Shari'a by John Makdisi, ARCE Newsletter, No. 114, Spring 1981), even a partial limitation of polygyny is against Islam and Shari'a. To date this case has not been resolved on the fundamental issue of constitutional principle.

The Sudan in September 1983 took the step of Islamicizing its legal system making the Shari'a the sole source of legislation, as occurred in Egypt in 1980. The Sudan, however, has gone much further in implementing the fuller application of Shari'a, especially with respect to the Hadd punishments for criminal offenses. A number of amputations for theft and floggings for alcohol sale or consumption have taken place since the fall of 1983. Formerly a legally plural society, applying a Western-derived Civil Code, with the Shari'a restricted to matters of Muslim personal status while a variety of customary legal traditions were recognized, this innovation has not taken place without controversy, and has resulted in a further deterioration



of relations between the dominantly animist South and the Muslim North. With the Unity Agreement signed between Egypt and the Sudan aiming toward eventual political and legal unification, the implication of the Islamicization of Sudanese law for Egypt may be more far-reaching than is perceived at the moment.

One of the more enlightened developments in recent family legislation in the Sudan and Egypt has been in the area of legal treatment of the divorced woman. Divorce as "the most hateful thing which God permits"<sup>4</sup> is not only shameful in Muslim society, but is sinful if not conducted for the right reason and in the correct way. The unilateral right of the male to divorce has been criticized for its harmful effects on women (Fyzee, 1964: ). The Shari'a jurists in the Sudan and Egypt have reacted in a humane way by placing restrictions on the absolute right of the husband to divorce, such as divorce pronounced in anger, drunkenness or as a threat. These early restrictions on repudiation occurred during the 1920's in both countries. Historically the enforcement of obedience rulings from the court forcing a woman to return to the husband's house from which she has fled (called *bayt eta'a*), often using police force, had been an oppressive aspect of the law for the abused wife who repeatedly fled her husband's house. Egypt in 1967 and the Sudan in 1970 placed a ban on the use of police force to return a wife to the husband's house, and although such orders can still be issued from the courts, they lack the "teeth" of law enforcement.

Since 1979 Egyptian law has made provisions for the divorced woman that have been substantial enough that one might hypothesize that the number of unilateral repudiations by men of their wives has been reduced. In divorce by pronouncement of the husband alone, the husband must relinquish the house or flat (a prized commodity in any Egyptian urban area) if there are children, and he is obliged to pay not only one year of support (*nafaqa*) but three years payment of *mota'a*, translated best as a "present" or some compensation for his having divorced his wife. So financially the husband stands to lose a great deal if he contemplates divorcing his wife, and this may well act as a deterrent to a large number of divorces, although the empirical evidence for such a claim is difficult to garner.

These laws in Egypt have not been challenged in the same basic way that the law regarding polygyny has, and apparently are applied without a significant degree of resistance in the courts, perhaps because they are perceived to be a fair recompense to the frequent social problem of the divorced or abandoned wife with children. Due to the acute housing shortage and the premium placed on having a separate dwelling for a newly married couple, many young people are negotiating certain conditions regarding the flat or house into the marriage contract, so as to avoid the full impact of the 1979 law.

Some of the Sheikhs at Al-Azhar University with whom I spoke about this law were of the opinion that the burden placed on the man is so great that it provides a climate within which men are now afraid to marry for fear of the negative consequences if the marriage ends in divorce. No doubt "winning the prize" of a flat after a divorce can be a much sought after victory and the law can be subject to manipulations and abuse. Dr. Said Al-Ashmawy, Egyptian Chief Justice, suggests that the law can be amended somewhat by requiring that an investigation be conducted by the court to determine which spouse has the greater need on the grounds of a humane social welfare policy, taking into special consideration the needs and custody of the children.

Future developments in the Shari'a in Egypt and the Sudan will depend very much on regional politics. The continued application of one of the strictest interpretations of Shari'a in the Sudan is a political risk for the government. For Egypt, we may expect more challenges to the 1979 legislation affecting marriage and divorce, in part because of the public controversy over some features of the law, and in part because the law was originally promoted and promulgated by the late Anwar al-Sadat.

#### Note on this Research

Until about 15 years ago the development of Islamic law in various Muslim countries was chronicled in the West by J.N.D. Anderson, primarily through the journal THE MUSLIM WORLD and a host of larger works. Since Sir Anderson has turned his attention to matters of religion, the void he left in this arena of scholarship has not (indeed could not) be filled by a single individual. I view my own work as having been built upon and as a continuation of the data amassed in Anderson's work in one part of the Islamic world, the Nile Valley. Much has changed since Anderson's time of writing and the study of Islamic subjects by Westerners has been subjected to some much needed criticism. No longer can Shari'a be referred to as "Mohammedan Law", not can scholars make the assumption that any move to a more Western-style system of law is a favorable development.

The change which is occurring in Islamic law in the Sudan and Egypt and elsewhere, whether seen as reform or restoration of the law, is nonetheless indigenous in inspiration and method. The 14 centuries of legal scholarship and opinion in the Shari'a is a vast and rich legacy of the past operating in the present. Islamic law is more than simple jurisprudence and embraces the very spirit of Islam itself, which, as Chief Justice Dr. Ashmawy has written, is the "path of mercy" (1983:12), thus encouraging a humanistic application of the law.

Carolyn Fleuhr-Lobban  
ARCE Fellow 1982-83  
Funded by the National  
Endowment for the Humanities



# Footnotes

1. The results of this research are forthcoming in my Islamic Law and Society in the Sudan, Frank Cass and Co., Ltd., London, 1985.
2. Hanafī law is one of four schools of Islamic law including also Mālikī, Shafi'ī, and Hanbalī law.
3. The Judicial Circulars, 1902-79, have been edited and translated by the author with the assistance of Hatim Babiker Hillawi and are to be published jointly by the JOURNAL OF AFRICAN LAW (1983/2 issue) University of London and the American University in Cairo Press.
4. From a hadith, one of the sayings attributed to the Prophet Muhammed.

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## BLINDNESS AND THE BLIND IN MEDIEVAL ISLAM

The focus of my research in Egypt was blindness and the blind in medieval Islam. The blind were the largest and most visible handicapped group in the medieval Islamic world. The study of their condition and society's reaction to this condition permits an examination of varied elements of Islamic society, as this society sought to deal with the social and psychological problems posed by its blind members.

In the Middle Ages, as at the present time, the Middle East was known for its large blind population. Not only are the blind documented extensively in medieval biographical dictionaries but by virtue of their occupations and status, they have provided us with much information concerning their material and psychological condition. In addition, the relationship of blindness to the physical and metaphorical concepts of vision gives it a cultural significance and a place in the symbolic systems of the society which transcend the physical handicap of the absence of vision.

During the nine months which I spent in Cairo, I examined and collected manuscripts of as-Safadi's biographical dictionary of the blind, the Nakt al-Himyan fi Nukat al-Umyan from Egypt and other Arab countries, as well as manuscripts of other blindness-related works. I also examined medieval biographical, historical, and legal sources, and consulted with scholars of medieval Islamic civilization, as well as individuals currently involved with the treatment of the blind in Egypt.

On the basis of my research, I was able to develop a new conceptualization of the position of blindness and the blind in medieval Islamic (especially Mamluk) civilization. The position of blindness can best be understood as the result of a dialectic between mental and social structures. The social and intellectual integration of blindness into Islamic civilization can then be seen as configured under a number of mental structures. These include defect, compensation (including sexuality), and integration. The relationships between blindness and these mental structures are played out through the roles that blindness and the blind play in a series of discourses (understood in the Foucaultian sense) articulated by Islamic civilization. These include discourses of words and meanings, of the body, of society, and of humour. The examination of these discourses makes it clear that Islamic society generally favored the integration of the blind and that conceptualizations of the visually handicapped articulated crucial civilizational attitudes to oral and written culture.

The results of these researches have already been presented as a public lecture at the University of Chicago in 1984, on



blindness and mentalities in Mamluk civilization, currently being prepared for publication. Research performed in Egypt is also being used in the preparation of an annotated translation of as-Safadi's essays on blindness, to be published with a monographic study of blindness and the blind in medieval Islamic civilization. Research conducted under the A.R.C.E. grant has also led to the completion of other blindness-related studies. The first of these is an article comparing Taha Husayn and the blind Indian writer, Ved Mehta, which appeared in *Fusul*, III (1984): 61-80. The second is a recently completed book-length manuscript on blindness in the autobiography of Taha Husayn. Neither of these two studies would have been written were it not for the time spent in Egypt, discussing blindness-related topics with Egyptian scholars and intellectuals. And both reflect, in different ways, experience gleaned in Egypt under the A.R.C.E. grant. During the grant period, I also completed three other studies on modern Arabic literature. One of these concerned the Egyptian feminist Nawal as-Sa<sup>c</sup>dawi, and benefitted from meetings held with her in Cairo.

In closing, I would like to give special thanks to the directors of the A.R.C.E. in Cairo, Rob Wenke and Nanette Pyne, who frequently went out of their way to facilitate my work. I also benefitted from discussions with A.R.C.E. fellows, especially after my presentation at one of the A.R.C.E. seminars.

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## MAMLUK WAQF DOCUMENTS AND THE STUDY OF SLAVERY: AN INTERIM REPORT

From July, 1982 through March, 1984, I was engaged in a research program jointly funded by the Social Science Research Council and the American Research Center in Egypt. The purpose of this program was to collect data for an intensive study of the role of slavery and clientage in the urban communities of the Mamluk Empire. When I left the U.S., I had spent over a year involved in the research of material on this topic in the published Mamluk sources (contemporary chronicles, legal texts, biographical dictionaries, works of *adab*, etc.), in the collections of the Firestone and Jones Hall Libraries at Princeton University. I had envisaged a dissertation based on similar sources with a strong emphasis on prosopographical material. I had planned to spend my research period abroad making use of unpublished Mamluk literary sources in manuscript collections in Vienna, Cairo and Istanbul and had also hoped to collect supporting data from what I thought at the time would be a much more limited body of source material: original Mamluk documents.

The extensive documentary material on slavery which I discovered in the Mamluk archives of Cairo not only led me to alter my original itinerary -- relinquishing my proposed research in Istanbul in favor of a longer period of research in Cairo -- but completely changed the data base of my study. Rather than base my work almost entirely on literary sources, which by their very nature, are limited and selective, I now have at my disposal a solid core of data from Mamluk *waqf* documents which will enable me to chart the real implications of the slavery/clientage relationships in terms of bequests and property relations within specific Mamluk households. Such concrete data on "ordinary" slaves and freedpeople -- individuals representing a broad spectrum of ethnic background, occupation and socio-economic status -- is essential to an understanding of the functioning of slavery in Mamluk society and rarely, if ever, appears in literary sources.

The Mamluk archives of Cairo are, for the most part, housed in two collections under separate administrations: the collection of the Ministry of Pious Foundations (*Wizarat al-Awqaf*) still frequently referred to by its old name as the *Daftarkhana*, located in the *Awqaf* building in Maydan Falaki, and the collection of the Personal Status Court, *al-Mahkama al-Shara<sup>c</sup>iyya*, which is currently located in the National Archives building (*Dar al-Watha'iq al-Qawmiyya*) in the Cairo Citadel. Each collection requires a separate application procedure and a separate security clearance. The researcher must be prepared to invest a substantial amount of time in visiting various administrative offices and in waiting for clearance. In my case, the clearance to



work in the Daftarkhana required three months while the clearance to work in the Mahkama required six weeks. The two collections are open to researchers for very limited hours, the Daftarhana from 9:30 to 1:00 Saturday through Wednesday and the Mahkama collection from 10:00 to 1:00 Saturday through Thursday. Obtaining permission to photocopy or microfilm in either collection is a very difficult and lengthy process and the researcher should expect to rely almost entirely on his or her handwritten notes. Given the limited hours of the two collections and the large number of documents involved (several thousand), the collection of data is a very slow and laborious process. This process has been greatly facilitated, however, by the publication of Dr. Muhammad Amin's Catalogue des Documents d'Archives du Caire (Cairo: IFAO, 1981), an invaluable aid to the researcher.

Most of the documents with which I have been working are deeds of waqf or other types of legal documents relating to waqf property. The waqf, normally translated as "pious foundation", was a means of placing property in a state of legal mortmain so that the income from this property could, in theory, serve as a perpetual fund for some pious or charitable institution. The format of the waqf, however, also allowed for bequests to individual and many property owners used the waqf as a means to protect their property from government confiscation as well as to circumvent the rigid rules of the Islamic law of inheritance. The deeds of waqf contain a highly detailed description of the property involved as well as of the proposed pious or charitable endowment along with a careful account of the individuals to whom specific benefits and bequests are to be given. The charitable endowment may be something as simple as the establishment of the post of Qura'n reader at the founder's favorite mosque or it may be something as elaborate as the founding of a school, hospital, Sufi khanqah, mosque or madrassa complex. The founder of the awqaf are, of course, all property owners, but those represented in the surviving documents cut across many sectors of society and include military men, merchants, judges, civilian officials, Sufis, wealthy eunuchs and women.

The most important aspect of the deeds of waqf for the study of slavery is that they provide a concrete way of mapping out personal networks of loyalty and obligation. The individual who founded a waqf not only made a statement of his commitment to the Muslim community at large by including some kind of charitable endowment but also expressed his responsibility towards the members of his own household and of his personal loyalty network. Freed slaves and to-be-freed slaves appear constantly in these documents both as recipients of bequests and benefits from their manumittors or from members of the manumittors' families as well as participants in property transactions involving the manumittors or manumittors' families. Since many of the founders of waqf's were themselves former slaves, it is possible to see the ties of clientage operating on two levels, that of former slave to former master as well as that of master to freed slave and to-be-freed slaves. These ties, on both levels, extend to family members and other dependents.

My initial work in Mamluk literary sources had convinced me that the key to understanding the system of Islamic slavery as it was practiced in the Mamluk Empire was an understanding of what followed slavery: the relationship of clientage. My work with documentary sources has both strengthened this conviction and added a new dimension to my understanding of the way in which clientage actually functioned within Mamluk households, both civilian and military. The financial bequests as well as actual exchanges of property which occur so frequently between former masters and former slaves as well as between their families provide added evidence that the relationship of clientage -- a relationship born out of slavery -- was one of the basic inter-personal ties in Mamluk society. It was a relationship, furthermore, which had very real economic implications for all parties involved.

The central role of manumission and clientage to the system of Islamic slavery practices in the Mamluk Empire provides the main theme for my study which is currently in progress. In a field which still relies heavily on traditional literary sources and often tends to neglect the available documentary material, the presentation and interpretation of extensive data drawn from documentary sources will, I believe, provide a methodological contribution not only to the study of slavery but to the broader study of Medieval Muslim society.

My research in Egypt would not have been possible without the kind cooperation of the staffs of the Dār al-Wathā'iq al-Qawmīyya and the Daftarkhana, especially Madame Swasan ʿAbd al-Ghanī, Mr. Hāshim ʿAbd al-ʿAzīz and Mr. Husam al-Dīn King. My deepest gratitude goes to Dr. Muhammad Amin of Cairo University for his help and encouragement during the course of my research as well as for the many hours he spent reading documents with me and patiently answering questions. I am also very much indebted to Dr. Hassanein Rabie, to Dr. Ahmad Haridi and, last but not least, to Dr. ʿAbd al-Latīf Ibrahim, the undisputed dean of waqf studies, for much learned advice.

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# THE I<sup>C</sup>JĀZ AL-QUR'AN AND THE ISMĀ<sup>C</sup>ILIS

## RESEARCH REPORT

During the three months I was in Cairo as an ARCE fellow, I devoted most of my time to i), consulting the Yemeni microfilm collection in the National Library (Dār al-kutub); ii), reading relevant printed material either in the National Library or the Cairo University Library; and iii), writing a first draft.

A treatise entitled Risāla fī bayān i<sup>C</sup>jāz al-Qur'ān, by al-Sultān al-Khattāb (d. 533/1138) seems to be the only monograph specifically on the i<sup>C</sup>jāz in Ismā<sup>C</sup>ilī literature, and therefore in order to find more material, I directed my efforts elsewhere.

Arabic manuscripts microfilmed from the Yemen Arab Republic and preserved in the National Library are one of the most important collections of Ismā<sup>C</sup>ilī and Zaydī manuscripts publically available.\* My first task was to look at a good many of the manuscripts which I thought might contain some information about this subject. Though this extensive reading was time-consuming, it gave useful information and further leads. After taking elaborate notes from certain manuscripts, I concentrated mainly on two Ismā<sup>C</sup>ilī works, viz., Abū Hātim al-Rāzī's (d. 322/934-5) A<sup>C</sup>lām al-nubuwwa, and al-Imām al-Mu'ayyad bi'llāh Yahyā's (d. 749/1348) al-Ījāz... fī 'ulūm haqā'iq al-i<sup>C</sup>jāz, which deal most directly with my subject.

The question of the i<sup>C</sup>jāz, as discussed and developed by the Mutakallimīn, is closely connected with the question of prophethood and its concomitants, such as the need for a prophet, the fact and manner of his being commissioned by God, and his performance of miracles as a test of his truthfulness. These issues were, therefore, widely debated during the early centuries of Islam.

Two of our Ismā<sup>C</sup>ilī authors have devoted separate works to defending the principle of prophethood and to refuting opponent's arguments against it. Al-Rāzī in his A<sup>C</sup>lām al-nubuwwa has reproduced a debate between himself and the physician-philosopher Abū Bakr Muḥammad al-Rāzī, the author of a violent polemic against religion. In his work Abū Hātim has devoted more than fifty pages to the question of the i<sup>C</sup>jāz, and I am summarizing the relevant passages. In his book Īthbāt al-nubuwwāt, al-Sijistānī (d. after 361/971), another important early writer, devoted its last chapter to dealing with the Qur'an as the miracle of the Prophet. Unfortunately this chapter is missing from all the extant copies of the Īthbāt.

\* A List of Arabic Manuscripts Microfilmed from the Yemen Arab Republic, Cairo, 1967. There are several errors and inaccuracies in it.

Hence, al-Rāzī's work is the most important of the early Ismā<sup>C</sup>ilī sources on the i<sup>C</sup>jāz.

Overall, my research is, thus, based mainly on the works of al-Rāzī and al-Sultān al-Khattāb. Other Ismā<sup>C</sup>ilī authors and their works will be cited and used as further supporting evidence.

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## THE LUNAR STATIONS IN ARAB TRADITION

During most of 1983 I spent a great amount of time frequenting the manuscript room of the Egyptian National Library (ENL) in Cairo. The purpose of my ARCE fellowship was to examine the collection of mss. in the library relevant for a survey I have been preparing of the so-called lunar stations or manāzil al-qamar in Arabic. Thanks to the exhaustive and no doubt exhausting efforts of Prof. David A. King in his index to the scientific manuscripts of the ENL, I knew that many manuscripts previously unexamined for study existed in the collections. Without the index, however, it would have been almost impossible to conduct this study, as the handlist does not contain short and anonymous texts such as I was to find useful.

As I am now well along in the process of writing up my study of the stations in both article and book forms, I will not dwell on details in this brief account of my research in 1983 as an ARCE fellow. Rather, I will provide a brief introduction to the subject, discuss useful sources and comment on the research context in Cairo.

### The Lunar Stations

Imagine yourself on a clear and starry night in the Arabian wastes with the camels safely hobbled near the camp. Appearing like distinct and twinkling dots of light in the sky above are the stars, which you have been taught by your relatives and friends to cluster into rough shapes of familiar items. A certain group are said to represent a lion, a camel, or even a fine steed. Another group represents a mythical giant or hero of local lore. As the year drags on the stars above change positions and at times certain clusters or constellations disappear altogether beneath the horizon.

The pre-Islamic Arabs, like all cultures in all places on the earth, mapped out the sky and made it into their own image. There was a practical side to all this star-gazing. It becomes apparent to any observer with a little patience that there was a regular seasonal sequence of stars. Certain stars would rise at dawn at the same time each year and then a full half year later set at the first morning light. The Bedouins did not understand the reasons behind the solar zodiac that belt of stars along the path of the sun which have predictable yearly risings. Yet, they picked certain of these stars and noted that at their rising (which would be obscured by the sun in most cases of zodiacal stars) or setting a rain regularly fell or it was time to go to the inner desert in search of pasture. In addition, the ancestors of the modern Bedouins observed the brightest stars in the sky, Canopus (suhayl) and Sirius (al-shi<sup>c</sup>rā al-Yamāniyya), which were not zodiacal stars, but still have a predictable yearly rising.

Such a star calendar was originally an indigenous Arab solar zodiac. As articulated by later Muslim astronomers, this was a system of 28 stars or asterisms along the ecliptic. These formed a giant

zodiacal belt encircling the celestial sphere. Arab astronomers borrowed from the Hindus the idea of asterisms at equal divisions along the ecliptic. The Hindus generally divided the ecliptic into 27 divisions, but the Arab astronomers took 28. Each division was called a station (manzil) and represented a little less than 13 degrees (i.e., 360 degrees divided by 28 stations). In practical terms each station was said to be in effect for 13 days, with one station having 14 days (i.e., 365 days of the year divided by 28 stations). In fact, the stars are not so nicely accommodating as to rise and set at equal intervals to each other. The concept of the station as an equal interval cannot be verified in pre-Islamic Arab lore. To the Arabs of the peninsula, it was sufficient to determine the approximate rising or setting (the latter could be readily observed) of a star.

To the reader not familiar with astronomy, this system may seem arbitrary. In fact the Indian concept was a lunar zodiac and represented the nightly progression of the moon across the sky during its sidereal revolution of 27 and one-third days. This must be distinguished from the synodic cycle of the moon or its phases (in 29 and one-half days) which determines the Muslim lunar calendar. Put briefly, the sidereal month represents the time it takes for the moon to reach the same point in the sky vis-a-vis the stars, while the synodic month is solely concerned with the waxing and waning of the moon itself.

Why 28 stations in the sky? The Hindus chose this because the moon was said to settle in a different station of stars each night, although in Hindu astronomy there were usually 27 stations. Arab astronomers cite the same reason for their system of manāzil al-qamar.

In trying to make sense of this star calendar today there are a number of obstacles. First, all of our sources on this calendar are from the Islamic period. We have selections of poetry and proverbs which do extend back into pre-Islamic times, but we are reliant on later Muslim authors for what was selected to be preserved and how this was interpreted. Reading the Kitāb al-Anwā' of Ibn Qutayba (died 276/879), one is led to think that the formal system of 28 lunar stations was known to the pre-Islamic Bedouin. Closer examination finds little evidence for such a claim. In the selections of poetry there is reference to stars which are part of the system, but nowhere is there a statement regarding the system as a whole. Most have taken the reference in the Qu'ran (Surah Yā Sīn, 36:40) to the manāzil as a reference to the lunar stations, but this could easily be a poetic use of the term; it is interesting to note that the more legitimate Arabic term naw' (plural, anwā') is mentioned in the hadith literature, but again with no indication of a system of 28 asterisms. In my survey of this calendar I plan to show why we should question Ibn Qutayba's reconstruction of the pre-Islamic star calendar.

A second obstacle to the study of the lunar stations is that there is a clear borrowing of ideas from Hindu astronomy and astrology as well as Babylonian astrology, the latter no doubt via Hellenistic



Egypt and Syriac magical texts. At some point later than the initial anwa' texts like that of Ibn Qutayba there arrived an astrological use of the lunar stations similar to the prognostications by the solar zodiac and the Syriac months (Tishrīn al-Awwal, etc.). The earliest reference I have thus far located with this type of astrological material is in the Rasā'ia of Ikhwān al-Safā' (10th century A.D.), though it may be earlier. Much of this material is attributed to Hermes (usually associated with the antediluvian patriarch Enoch) and indeed appears in some of the Latin Hermetic literature.

In meeting these obstacles I have begun with an examination of every Arabic reference (published or otherwise) I can find on the stations. This provides a broader perspective of the system as a whole, but many gaps still exist in understanding its evolution. The textual source material can be better understood by considering some of the practical uses and needs of astronomy by the people who wrote or used the texts and by examining ethnographic accounts of modern or recent star calendars in the Arab world. In Yemen, where I have examined star calendars, it is clear that farmers use systems adapted to local needs. They often recognize locally important stars rather than a theoretical division on the order of the lunar stations of Arab tradition.

One of the more exotic aspects of the lunar stations is their use for astrology. The following excerpt is from a collected work in the ENL:

"When the moon arrives at the Pleides (Thurayyā'), it is appropriate for activities peculiar to women. Traveling at this time is favored, as is entering into (the presence of) rulers and nobles and asking for what is needed from them. (Also suitable is) the company of brothers, the purchase of slavegirls (imā'), the making (of perhaps use is intended here) of weapons, and commerce. What is done except for marriage, will have a favorable outcome and increase blessing (baraka). New clothes should not be worn, nor be made. If a woman becomes pregnant at this time, she will have a boy (ghulam) who is good looking, tall in stature, with wide shoulders, brave, generous and likes people. A birth at this time is good (salih), happy (mas'ud) and fortunate (mahmūd); being the consequence and reaction to much sex (nikah is used). Planting is appropriate so that whoever sows at this time will harvest with happiness and delight and become richer by it. When the new moon arrives (at the Pleiades) resources will increase in the markets. If one strays away from his destination, he will find his way again with no trouble. The best (astrological) hours at this time are the hours for Mars and Venus."

Since this information is related to the lunar zodiac it does not coincide with the lunar month nor precisely with the solar month, although it is roughly the same for the latter. I have seen at least two almanacs in the ENL which provide this sort of prognostic detail for each station. It would appear that this type of astrological use of the stations stems from the Hindus.

# Sources

This is only the briefest of introductions to the lunar stations in Arab tradition. A full treatment will be made later, but there are several sources which should be consulted for anyone interested in the system. For the pre-Islamic system, or what is said to be pre-Islamic, one can start with the article on anwa' in the second edition of the Encyclopedia of Islam (I:523-524). An excellent bibliography of early texts is provided by Sezgin in volume VII of his Geschichte des Arabischen Schrifttums (pp. 322-370). The basic published source is the Kitab al-Anwa of Ibn Qutayba (Hyderabad, 1956), but there is also a similar account by Ibn al-Ajdābī (Damascus, 1964). The latter, it should be noted, has numerous errors in the edition. At the ENL I found three late copies of an anwa text attributed to Abū Ishāq al-Zajjājī. This may be Abū Ishāq al-Zajjāj (died ca. 311/923), but may also have been confused with Abū al-Qasim al-Zajjājī (died 337/949). This text, which has not been studied yet, offers a different perspective of the lunar stations and some unique interpretations of the meanings of certain star names.

The lunar stations represent a subject commonly referred to in Arab astronomical texts, lexical studies and almanacs. I was able to examine about 25 almanacs at the ENL, all of which listed times for the risings and settings of the lunar stations. The renowned Calendar of Cordova, which was translated into Latin at an early date, provides information on the stations. This is derived from Ibn Qutayba, as is the discussion in Qazwīnī's Ajā'ib al-Makhlūqāt. The latter has introduced several errors. Indeed, the whole genre on the stations is fraught with errors. Many of the texts simply repeat earlier information, which must have been quite meaningless in later contexts. As a final note, one should avoid the brief treatment of the manāzil by Ruska in the original Encyclopedia of Islam (vol. 5, p. 232), which does not begin to do justice to the subject.

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## GEOLOGIC STUDY OF THE SPHINX

Summary. The portion of the Mokattam Formation exposed at the Sphinx has been divided from bottom upwards into three members namely, the Rosetau Member, the Setepet Member and the Akhet Member. The Rosetau Member is a bioherm; the Setepet Member consists of six, rhythmically deposited beds and the Akhet Member is marly below and a rather pure limestone above from which the head of the Sphinx has been carved. A geological map of the Sphinx based on the recognition of these three members has been presented. Petrographically, these limestones are packed biomicrites with variable quantities of silt, clays and hematite and the evaporites halite and gypsum. Structurally, the strata dip southward as against the regional northwards dip of all tertiary strata in the Nile Valley. The joints trending orthogonally in a NE and NW direction cause dislodgment of large blocks of limestone of the Sphinx core.

Introduction. My previous studies of the Sphinx concern the weathering of stone and means for arresting the decay phenomenon (Gauri, 1981, 83; Gauri and Holdren, 1981). This article delineates the geological framework as a reference for future studies.

In the course of my field work at the Sphinx, including a 5-week intensive study during November-December 1981, the necessity of conducting basic geologic work became apparent. In filling this need, Mark Lehner, Director of the Sphinx Project of the American Research Center in Egypt, was most instrumental, especially due to his keen insight into natural phenomena and his skill in the use of survey equipment. In minimal time we had a topographic map of the Sphinx area which enabled us to place the newly recognized geological horizons in their precise geographical location. This was also aided by the newly developed photogrammetric map of the Sphinx by Ulrich Kapp of the German Institute in Cairo. Mr. Lehner and I worked together in the field throughout my several visits to Giza during 1980-82. Dr. James P. Allen, then the Director of ARCE in Cairo, selflessly devoted many hours to facilitate our work and sponsored my visits to Cairo and other places to obtain a broader perspective of the conditions of monuments in Egypt. In this connection, I also wish to recognize the help of Dr. Qadri, President, Egyptian Antiquities Organization in inviting me to Cairo for a week in 1982 during which I had the opportunity to visit ancient quarries in the Mokattam Formation, east of the Nile River.

I am most gratified by all these associations and the results that have sprung from these, i.e., the realization among all

concerned that scientific investigation is essential to our understanding, particularly of the phenomenon of stone decay and for guidance in selecting appropriate techniques of conservation.

Regional Setting and the Materials of Study. Located at the southeastern flank of the Giza Plateau (Fig. 1), the Sphinx is carved from the middle Eocene limestone of the upper Mokattam Formation. Due to the southeasterly dip of the strata and the low elevation (appx. 100m.) of this limestone plateau, the equivalent of rocks occurring in the head region of the Sphinx have not been found elsewhere to the immediate north, east, or west. They are even absent in the southerly direction due to extensive quarrying marking the site of the Pharonic Necropolis. However, the rocks of the thoracical region of the Sphinx are widespread in the Pharonic Necropolis. However, the rocks of the thoracical region of the Sphinx are widespread in the Pharonic Necropolis. Farther south, these rocks disappear under the next younger Maadi Formation and the desert sand. The following study therefore is based on rock samples from the core of the Sphinx and the walls of the ditch surrounding it in all directions except in the east where the Sphinx sanctuary is located. Large limestone blocks used for enclosing and partitioning the sanctuary appear to have been extracted from the site of the ditch (Lehner, 1980; Aigner, 1982).

The lower portion of the Sphinx is veneered with dimensional limestone blocks. Some of these blocks, used during several restorations beginning with the pharonic times, were extracted from a variety of geological horizons from quarries located in the Eocene beds right of the Nile River. Since the stones of the Pharonic restoration have not deteriorated at all over these nearly 5,000 years of exposure at the Sphinx, we have studied the porosometric properties of these stones with a view to determine criteria for selection of durable stones for future restoration (Gauri, 1981 and 1983).

Stratigraphy and Sedimentology of Rocks at the Sphinx. The limestones exposed at the top of the Giza Plateau as well as those exposed at its bordering cliffs have been assigned to the Mokattam Formation (Said, 1962). The last derives its name from the Mokattam Hill at Cairo, east of the Nile River. The literature review reveals a general consensus of opinion that there is a good stratigraphic match between the limestones on both sides of the Nile at Cairo. However, the portion of the Mokattam Formation studied in the Sphinx area shows, in itself, a distinct sedimentologic development which allows us to divide this portion of the Mokattam Formation into three members (Plate 1 and Figs. 2, 3). The proposed names of these members are:

Akhet Member  
Setepet Member  
Rosetau Member

\* These names were suggested by Mr. Lehner



Rosetau Member (this name derives from the ancient Egyptian place-name of the Sphinx precinct in the 18th Dynasty). The lowest member in this area, it is a massive reefal (bioherm) limestone with a knobby surface having a relief of nearly one meter.

This member is well exposed in the wall of the north ditch whence it continues and forms the upper surface of the slope leading to the modern road to the pyramids. It also forms the lower part of the western and the southern wall of the ditch. At the core of the Sphinx, this member is largely covered beneath the veneer stone. However, it outcrops at the floor of the south ditch. In the south-east corner of the south ditch, this horizon dips under the Setepet Member.

Setepet Member (the name is derived from ancient Egyptian STPT, the New Kingdom name for the immediate Sphinx sanctuary). The Setepet Member is nearly 10 meters thick sequence of six parallel bedded layers each ranging in thickness from 1 to 2 meters (Fig. 3A). Except layer 5, all other beds become progressively thinner towards the upper reaches of this member. The differential weathering has prepared this sequence into distinctly alternating projected and recessed layers.

The Setepet Member forms the main core body of the Sphinx. In the south and west of the Sphinx, the Causeway and the Pharonic Necropolis are located in these beds.

These beds reveal cyclothemic pattern of sedimentation. At the base, the hummocky topography of the Rosetau Member is largely obliterated due to the filling in of deeper portions by the argillaceous silty limestone material of the lower portion of Bed 1. By the termination of deposition of this bed the sedimentation surface appears to have been rendered flat so that a horizon in the lower portion of Bed 2 has a planar surface extending over the entire area of study. We have used this "Dip plane Marker Horizon" to determine the regional dip of the strata in the study area.

The pattern of sedimentation of the Setepet Member is that from below upwards, within a single bed as well as from the base of the member to its top, there is a progressive reduction of the clastic material and the evaporite minerals such as halite and gypsum in the carbonate sediment. As a result the lower marly portion of the first bed is darker than the upper more calcareous portion. This distinction disappears upwards so that the upper beds appear to be uniformly white throughout its thickness.

The progressive reduction in the influx of the land derived clastic fraction of the sediment is indicative of the increasing calmness of the sea within the period of deposition of a bed as well as the deposition of this entire member. This genetic control of sedimentation and the change of this rhythmic activity towards

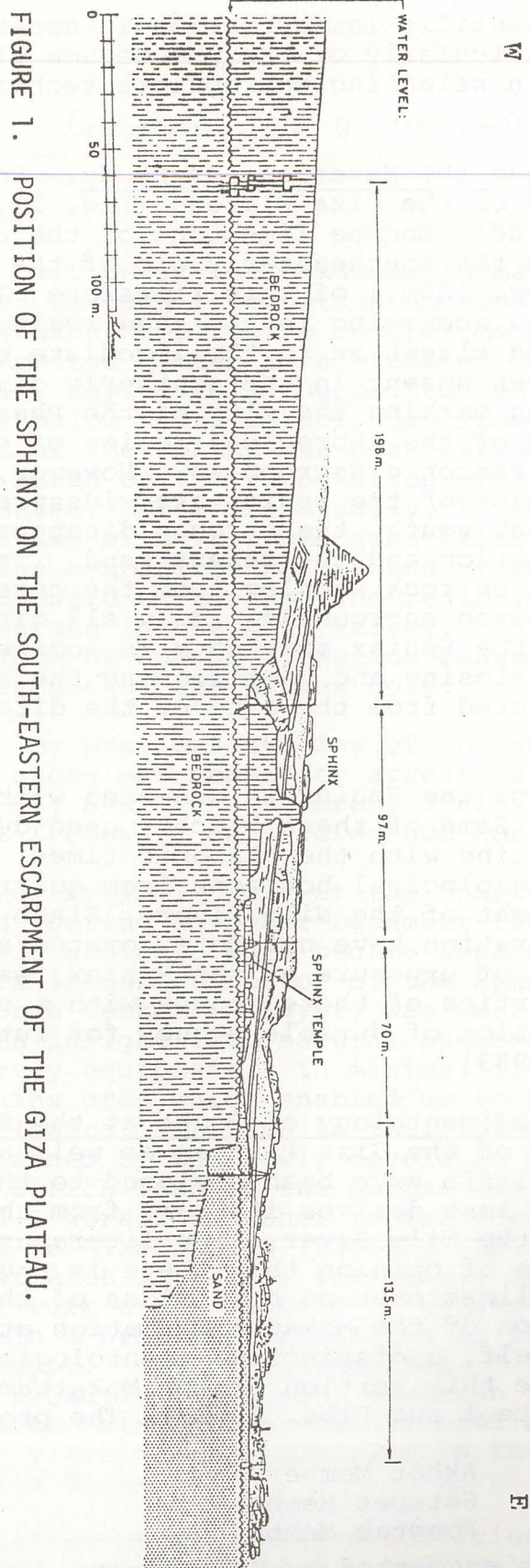


FIGURE 1. POSITION OF THE SPHINX ON THE SOUTH-EASTERN ESCARPMENT OF THE GIZA PLATEAU.



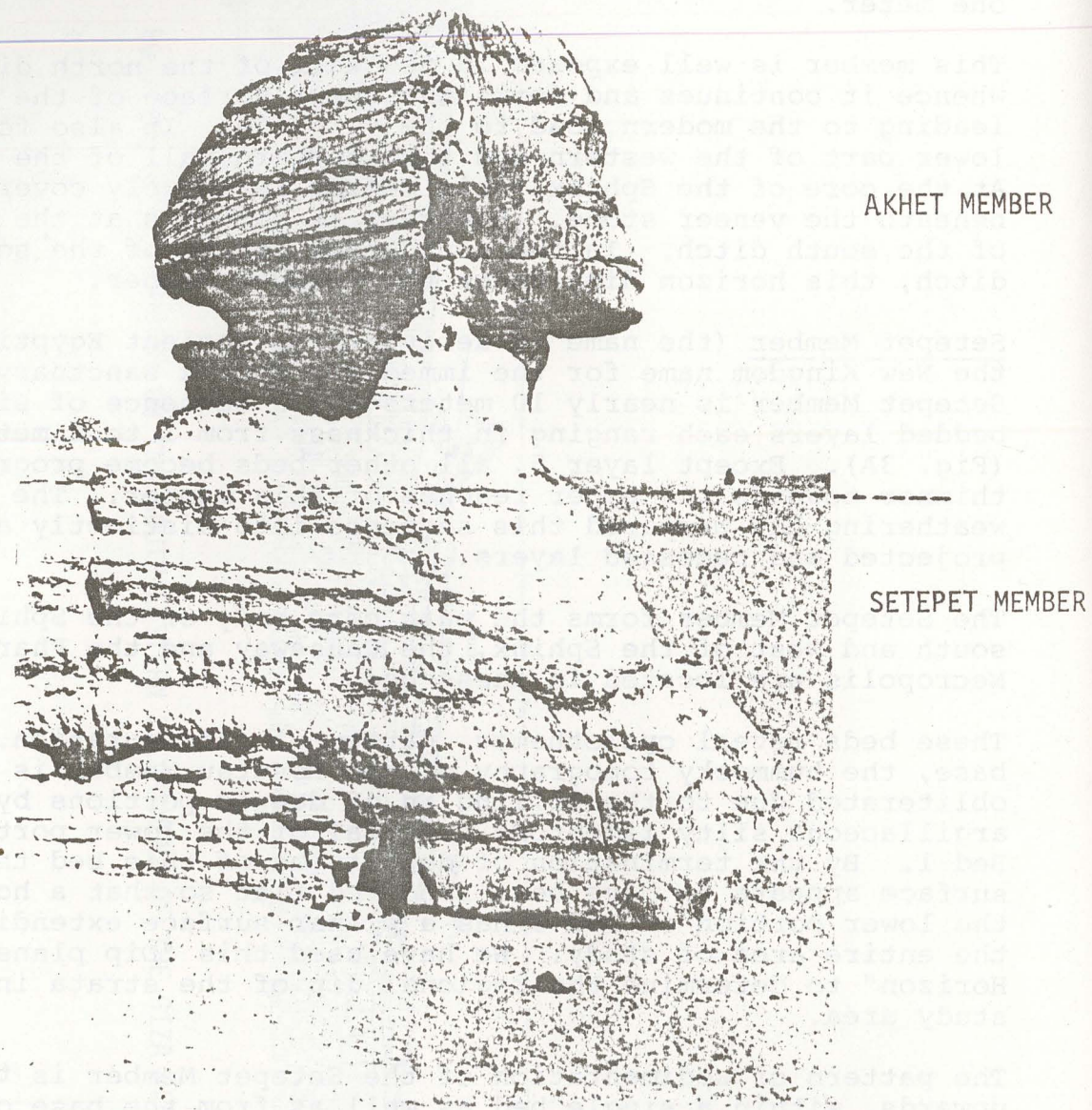
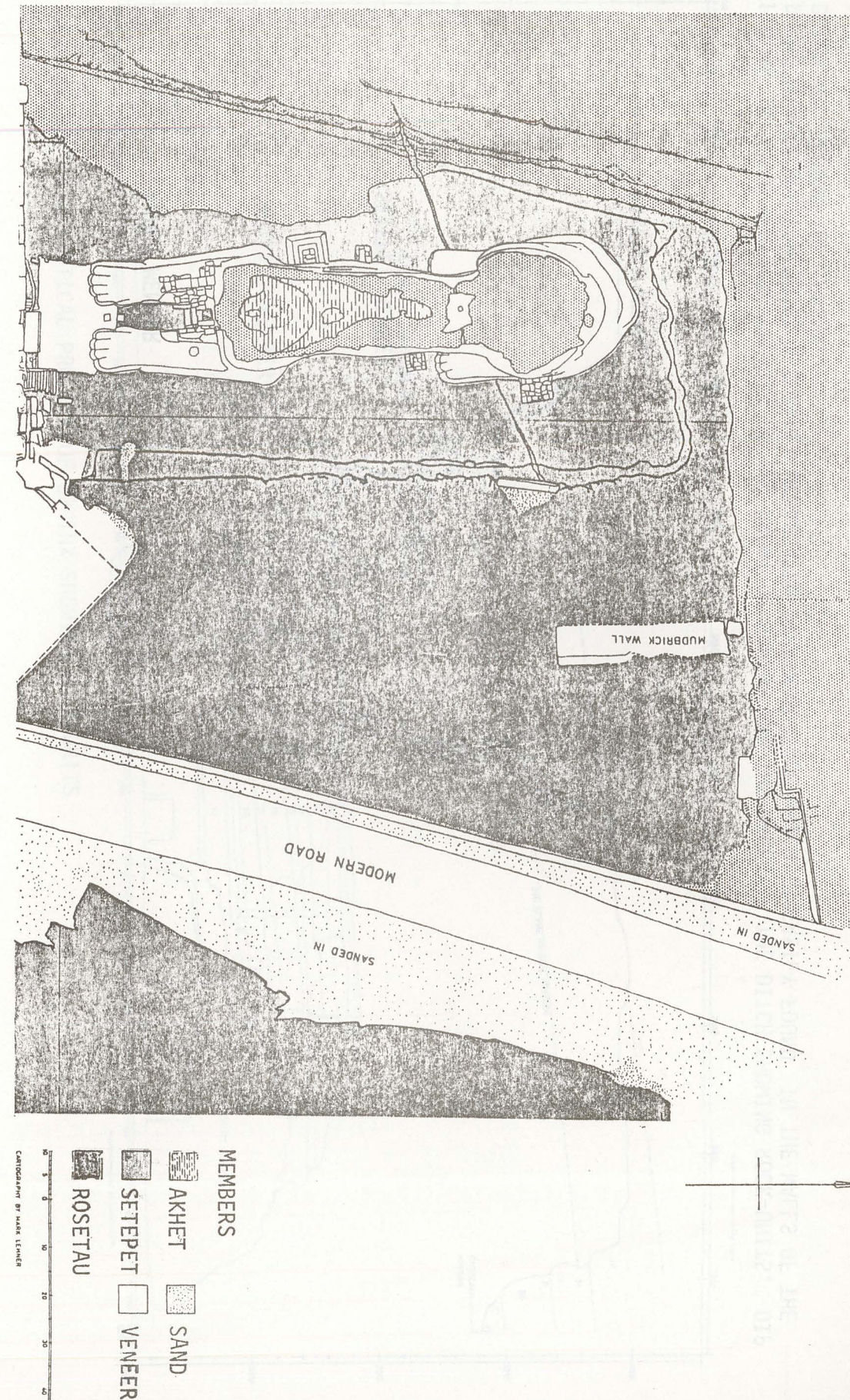


PLATE 1. 1925 PHOTOGRAPH OF THE SOUTH-EAST SIDE OF THE SPHINX, YET BURIED TO A LARGE EXTENT UNDER THE DESERT SAND. THIS PHOTOGRAPH VIVIDLY DISPLAYS THE BOUNDARY BETWEEN THE NEWLY RECOGNIZED AKHET AND THE SETEPET MEMBERS. PHOTOGRAPH COURTESY OF THE CENTER WLADIMIR GOLLENISCHEF.

FIGURE 2. GEOLOGICAL MAP OF THE ROCK-UNITS





-31-

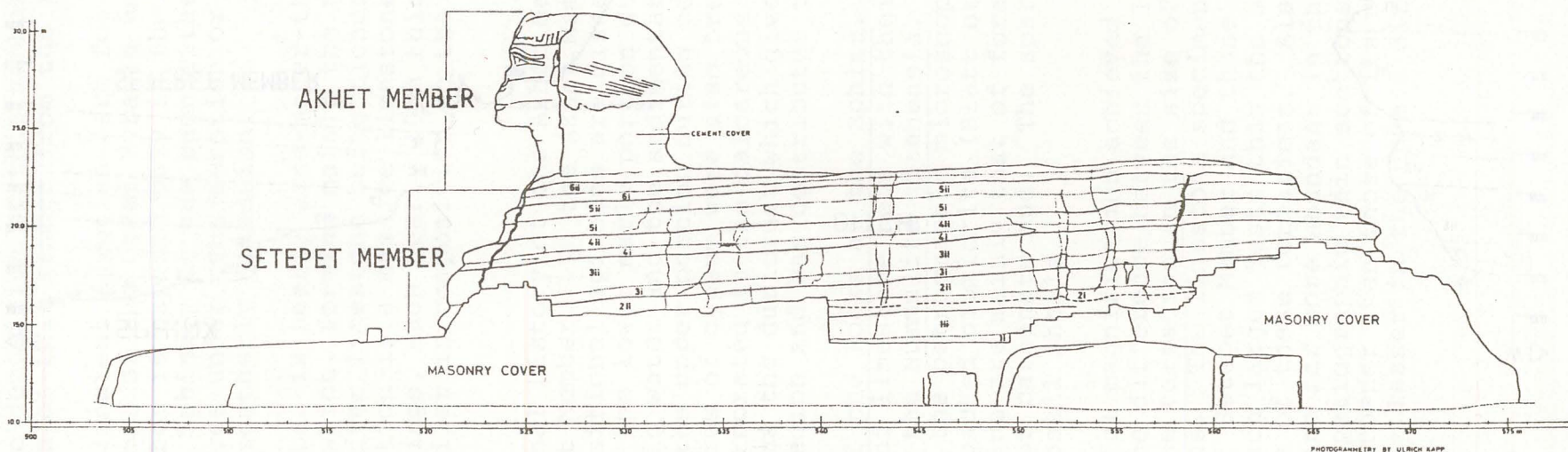


FIGURE 3B. E-W VERTICAL PROFILE OF SPHINX SHOWING ROCK-UNITS

-30-

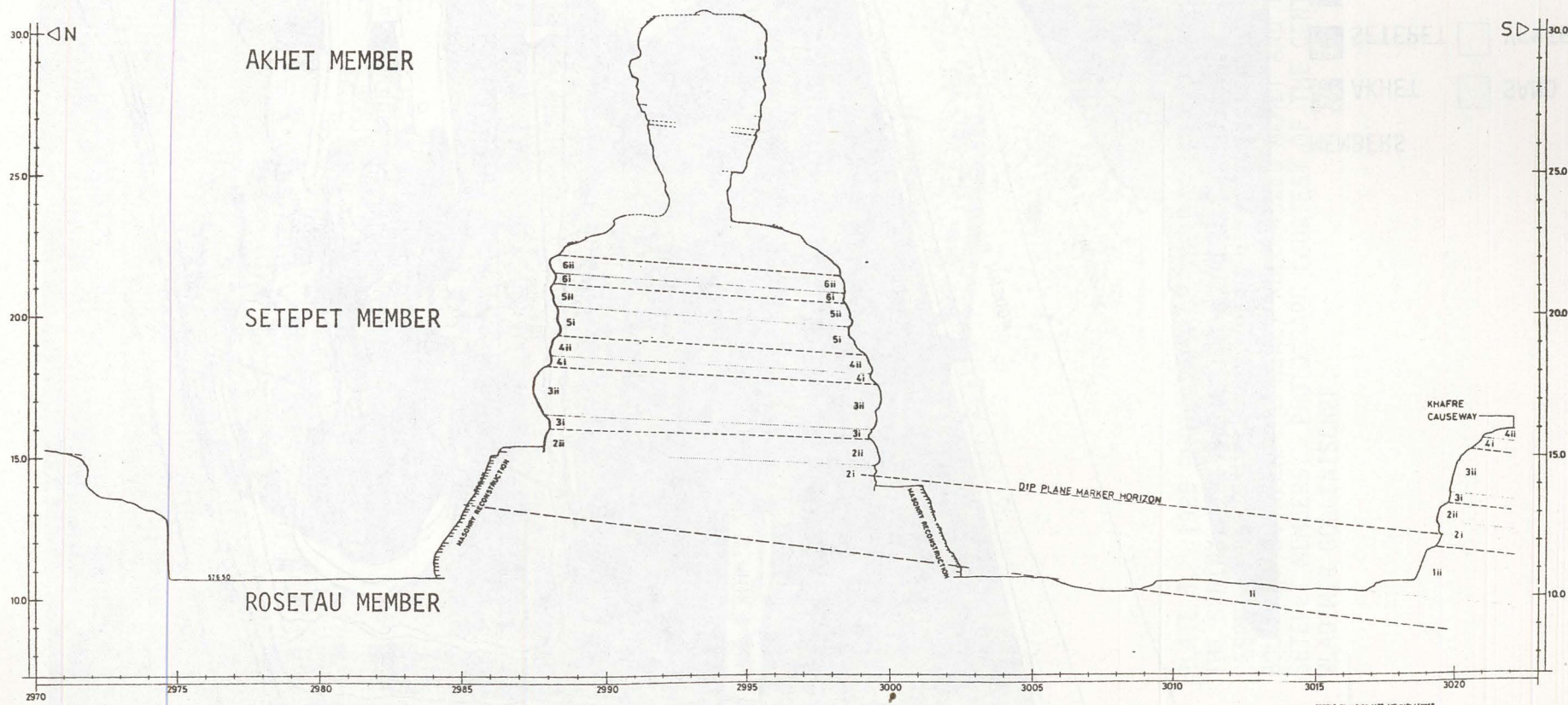


FIGURE 3A. N-S VERTICAL PROFILE OF THE FRONT OF SPHINX AND THE WALLS OF THE DITCH SHOWING ROCK-UNITS. DIP PLANE MARKER HORIZON JOINS A SHARPLY DEMARCATED STRATA SURFACE WHICH IS EASILY FOUND IN THE WALLS OF THE DITCH ALL AROUND THE SPHINX.



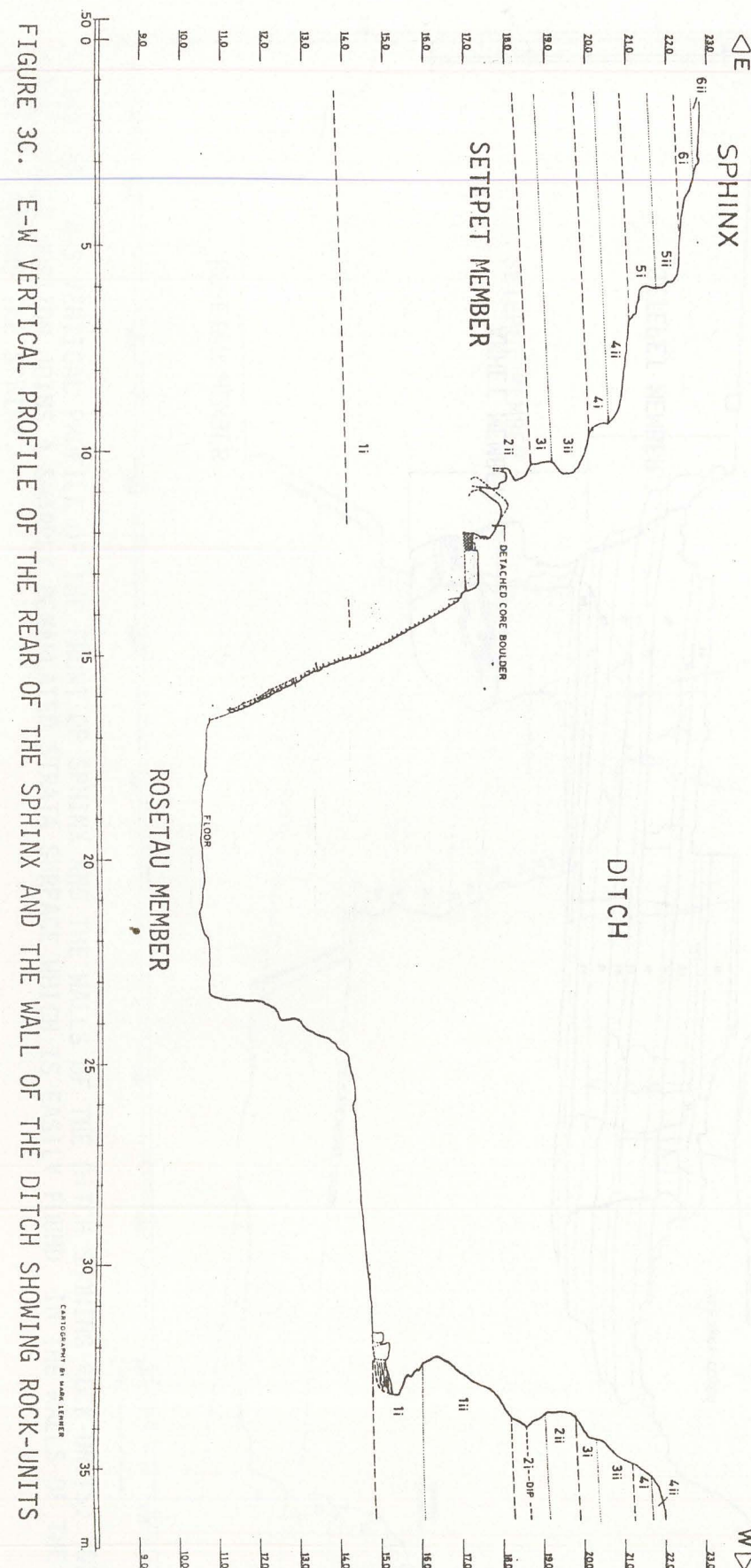


FIGURE 3C. E-W VERTICAL PROFILE OF THE REAR OF THE SPHINX AND THE WALL OF THE DITCH SHOWING ROCK-UNITS

the end of the deposition of this member are the reasons for our separation of this member from the following Akhet Member.

Akhet Member (ancient Egyptian term for the "Horizon of Khufu"; one of the names of the Great Pyramid and the Giza Plateau). The Akhet Member is exposed only in the neck and the cephalic region of the Sphinx. It has been either quarried away from the rest of the area under consideration or is buried under the sands in its southerly extension.

The Akhet Member is nearly nine-meter-thick sequence the lower one-third of which, forming mainly the neck of the Sphinx, is a relatively softer limestone being richer in the clastic fraction. The upper portion is a massive limestone interlayered with four distinct partings, each nearly 10cm thick, of somewhat softer limestone similar in composition to the limestone of the neck.

The depositional history of the Akhet Member is similar to that of the Setepet Member. In the Akhet Member, however, only two distinct depositional episodes are discernable namely, the deposition of the lower marly portion during conditions of somewhat turbid water and the sedimentation of the cleaner carbonate of the upper portion during conditions of calm water. Small quantities of gypsum were also precipitated from the water and were incorporated in the calcareous sediment. This gypsum presently forms the duricrust which gives the brownish appearance to the head region and has contributed towards its durability.

Petrography of the Rocks at the Sphinx. The rocks of the Sphinx are a series of limestone beds with their characteristic large foraminifera, the Nummulite gizehensis. These limestones, studied under the petrographic microscope (Plate 1) are extremely fine-grained packed biomicrite (Blatt et. al. 1972) in which the skeletal remains are mainly that of foraminifera embedded in a small amount of carbonate mud. The sparry calcite occupies the cavities in fossil shells.

Under the useful magnification achieved by the petrographic microscope, the difference between the limestones of the Sphinx is based on the variation in the size of the allochem, i.e., the skeletal grains. The limestone specimens of the upper portions of each bed of Setepet Member and those from the upper Akhet Member have much larger tests than the specimens from the marly lower portions of these formations. Also the grains of silt and hematite are far more abundant in the later specimens. As a result, the petrographic thin sections of the lower portion of a bed are browner than those of its upper, and the brownishness is successively lesser in the upward direction of Setepet Member.



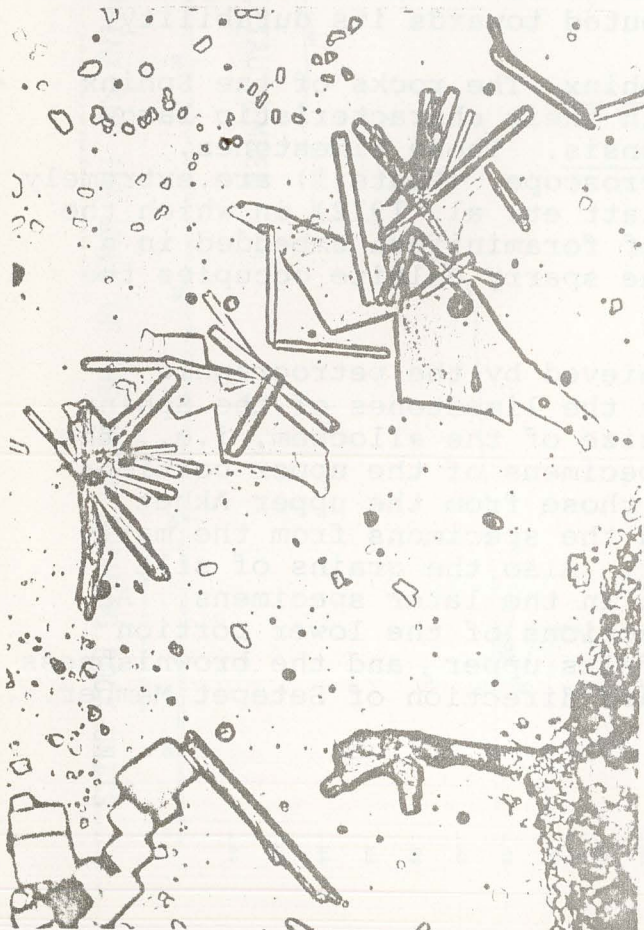
2C. AKHET MEMBER, UPPER LIMESTONE

X 100



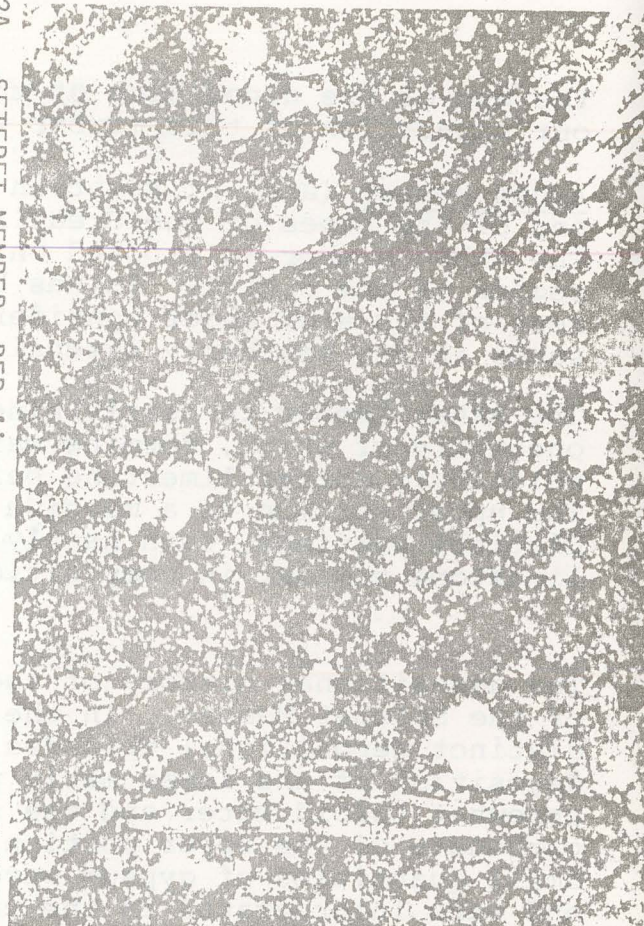
2D. AKHET MEMBER, UPPER LIMESTONE

X 100



2A. SETEPET MEMBER, BED 4i

X 100



2B. SETEPET MEMBER, BED 4ii

X 100



These variations in properties, i.e., the grain size, etc. do not significantly control the behavior of the limestone towards weathering. But it is readily apparent from Plate 1 that the rock units have undergone differential weathering. For a complete characterization of the limestone, therefore it was essential to segregate the components of the limestone in order to resolve those which are present in extremely small quantities. For instance, the water-soluble salts were extracted by placing powdered limestone in deionized water. This water then was analyzed in two ways:

1. directly by atomic absorption spectrophotometry and by wet chemical techniques for quantitative analysis of the ionic composition (Table 1).
2. the salts were precipitated from this water and then studied under a petrographic microscope (Pl. 2) and x-ray diffraction (Fig. 4) to determine the mineralogical composition.

Further, for the purpose of concentration of other possible minerals in the limestone relative to calcite, the samples were powdered to approximately 300 mesh and digested in 10% acetic acid for two hours. The fine residue, while in a state of suspension, was collected on filter papers and analyzed by x-ray diffraction. The following are the results of these analyses:

Water Soluble Salts. Two major water soluble salts have been identified as gypsum ( $\text{Ca SO}_4 \cdot 2\text{H}_2\text{O}$ ) and halite ( $\text{NaCl}$ ). A less stable phase of calcium sulfate, namely  $2 \text{CaSO}_4 \cdot \text{H}_2\text{O}$ , has also been identified in the precipitates, but it cannot be determined whether this phase occurs in the rock as such or that its existence in the precipitate is due to the chemical controls relating to ionic concentrations, temperature, and rate of crystallization, etc. Gypsum and halite are present in all the studied samples. Plate 2 shows the crystal of these salts growing from the stone extract in deionized water on petrographic slide. Fig. 4 shows these salts as identified by x-ray diffraction. The ionic compositions of these salts are given in Table 1.

The relative abundance of the salts is of great interest. Gauri and Holdren (1981) reported that halite is present in larger quantities in the lower portion of each bed of the Setepet and Akhet Members while gypsum occurred in larger quantities than halite in the upper portion of each bed. Table 1 reveals some variation from this, even though a similar pattern is easily discernable. The variation is probably due to sampling: the specimens for 1981 study were derived from the weathered surface of the Sphinx core while the present samples are mostly from the unweathered portion of respective rock units.

Non-Carbonate Clastic Fraction. The major properties of the fraction consisting of clay minerals is revealed by the x-ray diffraction spectra. The 2 $\theta$ , 5-15% reflections indicate a large



d-spacings in the range of 5 to 15A which are characteristic of clay minerals. The identification of individual clay minerals is permitted by the following data.

Table 1.

Water soluble salts in the lower four beds of Setepet Member; expresses as weight percent of stone. The designation i in each bed refers to the lower marley portion of the bed and ii is for the upper more calcareous portion.

Bed	K <sup>+</sup>	Na <sup>+</sup>	Ca <sup>2+</sup>	Mg <sup>2+</sup>	NO <sub>3</sub> <sup>-</sup>	Cl <sup>-</sup>	SO <sub>4</sub> <sup>-2</sup>	Total
6ii	0.009	0.074	0.061	0.004	0.014	0.098	0.998	1.258
6i	0.012	0.163	0.269	0.021	0.068	0.270	0.726	1.529
5ii	0.012	0.096	0.269	0.021	0.057	0.220	0.726	1.901
5i	0.034	1.110	0.267	0.038	0.166	2.050	1.110	4.775
4ii	0.009	0.130	0.110	0.030	0.049	0.370	0.038	0.737
4i	0.009	0.210	1.480	0.021	0.013	0.410	2.900	5.043
3ii	0.018	0.600	0.520	0.017	0.014	1.130	1.090	3.389
3i	0.012	0.380	0.085	0.015	0.019	0.700	0.058	1.269
2ii	0.006	0.840	0.091	0.008	0.006	1.560	0.130	2.640
2i	0.028	0.300	0.480	0.042	0.064	0.550	1.170	2.630
1ii	0.008	0.500	0.071	0.014	0.008	1.000	0.062	1.663
1i	0.020	1.130	0.064	0.020	0.017	2.180	0.086	3.517

Table 2.

Carbonate and clastic materials in the lower four beds of the Setepet Member; expressed as weight percent of stone.

Bed	Carbonate	Clastic			Total
		Sand	Silt	Clays	
6ii	95.654	2.457	1.158	0.611	4.226
6i	95.018	7.324	0.625	1.515	9.464
5ii	95.877	1.957	0.899	1.140	3.996
5i	88.072	4.605	2.775	4.067	11.447
4ii	94.342	0.030	4.530	0.370	4.920
4i	86.817	0.160	7.330	0.650	8.140
3ii	93.981	0.400	1.700	0.510	2.630
3i	93.501	0.050	4.720	0.460	5.230
2ii	93.710	0.050	2.890	0.710	3.650
2i	88.060	0.140	8.480	0.690	9.310
1ii	91.757	0.240	5.380	0.950	6.580
1i	70.353	0.200	25.170	0.760	26.130



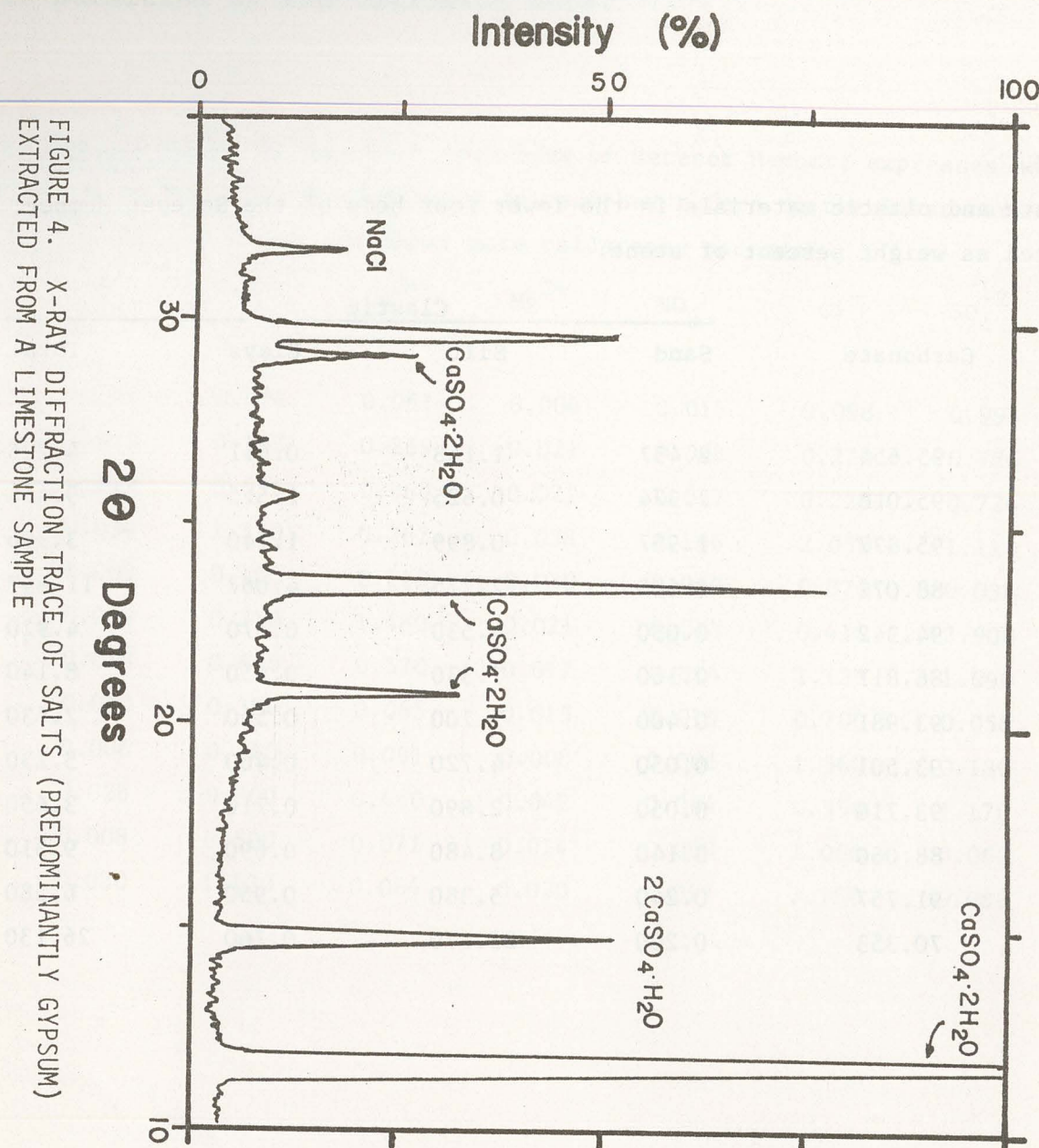


FIGURE 4. X-RAY DIFFRACTION TRACE OF SALTS (PREDOMINANTLY GYPSUM) EXTRACTED FROM A LIMESTONE SAMPLE

2θ degrees	Mineral
5.1 - 5.3	Montmorillonite
7.2 - 7.5	Montgorillonite
9.8 - 10.2	Illite
12.5	Kaolinite
25.0 - 25.2	Kaolinite

The kaolinite occurs in all the studied samples but Illite and Montmorillonite have been identified in the upper limestone of the Akhet Member and in Bed 3 of the Setepet Member.

The percentage of the non-clastic fraction follows a definite pattern (Table 2). The lower marly portions of the Setepet beds have larger quantities of these, relative to the respective upper limestones. The Akhet Member follows the same pattern.

Carbonate Fraction. Needless to say that the most abundant mineral species is calcite; aragonite or magnesium carbonate has not been identified. The nature of the calcitic constituents has been discussed earlier in somewhat greater detail.

Structural Geology of the Sphinx Rocks (K.L. Gauri and D. Dockstader<sup>\*</sup>). The Sphinx region is a part of the Egyptian unstable shelf of which the structural features are minor folds and extensive fractures and faults. At the Sphinx, joints criss-cross the bedrock. Joint orientation was measured in the rocks at the Sphinx and those forming the walls of the Sphinx Ditch. A structural map of the Giza Pyramid region is reproduced from Omara, 1952 for a large perspective of the joint patterns.

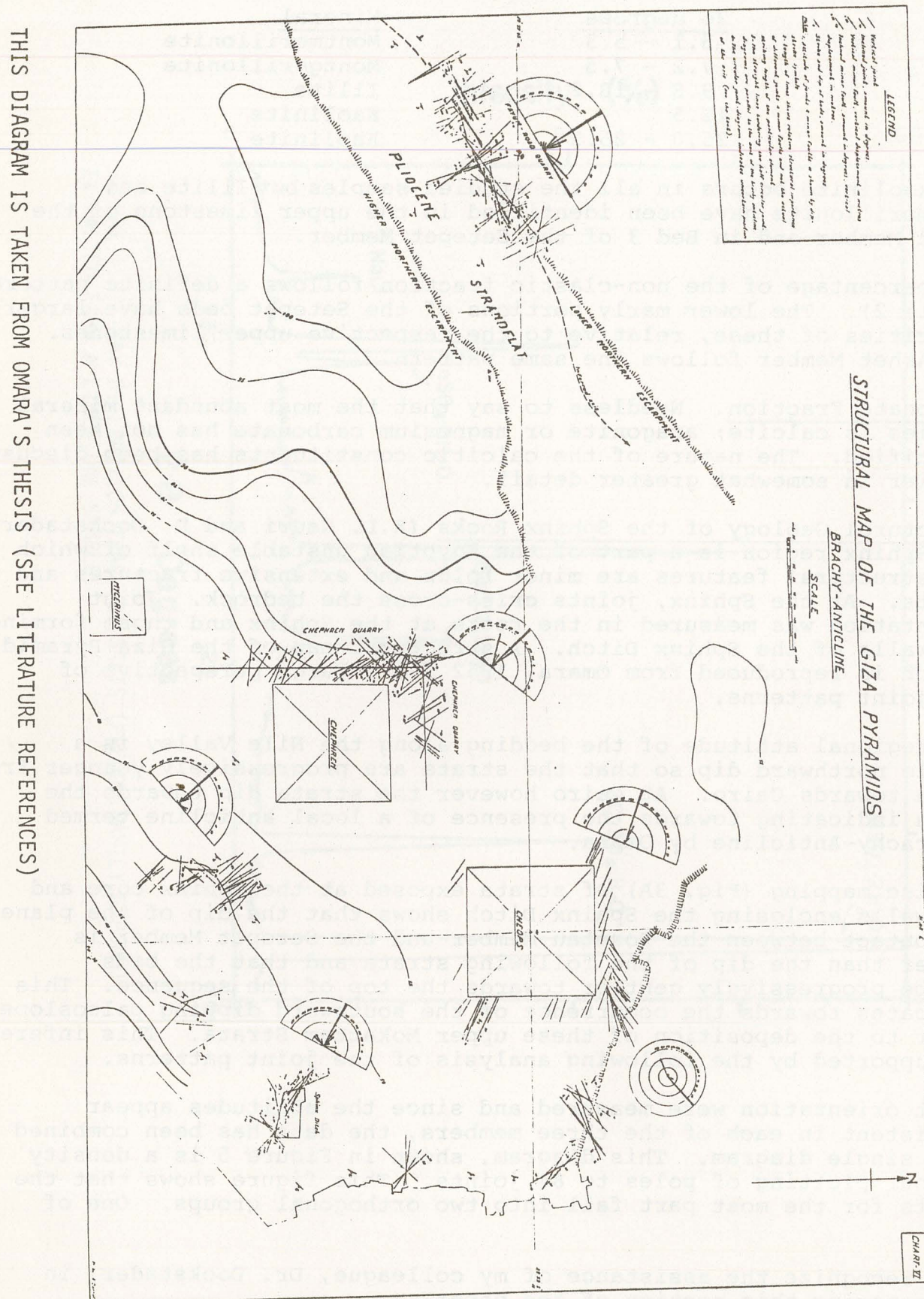
The regional attitude of the bedding along the Nile Valley is a gentle northward dip so that the strata are progressively younger from Aswan towards Cairo. At Cairo however the strata dip towards the south indicating towards the presence of a local anticline termed as Brachy-Anticline by Omara.

Precise mapping (Fig. 3A) of strata exposed at the Sphinx core and the walls enclosing the Sphinx Ditch shows that the dip of the plane of contact between the Rosetau Member and the Setepet Member is larger than the dip of the following strata and that the beds become progressively gentler towards the top of the sequence. This indicates towards the occurrence of the southward dipping paleoslope prior to the deposition of these upper Mokattam Strata. This inference is supported by the following analysis of the joint patterns.

Joint orientation were measured and since the attitudes appear consistent in each of the three members, the data has been combined in a single diagram. This diagram, shown in Figure 5 is a density contour plotting of poles to 84 joints. This figure shows that the joints for the most part fall into two orthogonal groups. One of

\* I recognize the assistance of my colleague, Dr. Dockstader, in preparing this section of the paper.





these groups trends generally northeast to southwest while the other trends northwest to southeast. The centers of these clusters are precisely perpendicular, with trends of N36W and N54E. This general pattern is also seen, though less conspicuously, in the map reproduced from Omara.

The observed orthogonal joint pattern is characteristic of extensional regimes resulting from mild deformation. Similar patterns are frequently observed over gentle anticlines or domes. However, these strata show no evidence of the deformation usually associated with the joint distributions observed. The explanation for these joint patterns apparently lies in the underlying Cretaceous sediments. These rocks have been bent into a series of anticlines, with a northeastern trend and also contain fractures and faults in a NW-SE direction as well as parallel to the fold axes. These features are the result of late Cretaceous tectonic activity (Salem, 1976 and Said, 1962).

Since joints in the undeformed Eocene strata have the trends of fractures in the Cretaceous units, it seems likely that the regional post Eocene epeirogenic movement, perhaps associated with the opening of the Red Sea and the Gulf of Suez, has caused the Cretaceous fractures to propagate into the overlying Eocene sediments. From the intensity of the Cretaceous deformation a broader distribution of dips would be anticipated for the joints in the Cretaceous units than the distribution that has been observed in the Eocene strata. The subvertical joints in the Cretaceous units have propagated into the overlying strata more effectively than those with lesser dips. This preference is consistent with the hypothesis of propagation in an epeirogenic environment. In this setting there is no strong horizontal compression to reactivate fractures with shallow dips, and so movements would all be nearly vertical.

The existence of two orthogonal, subvertical joint groups in the rocks of the Sphinx has been detrimental to its durability. Where joint intersections occur near the edge of the Sphinx, they separate wedge-shaped blocks from the rest of the sculpture, causing massive loss of material from the core.

K.L. Gauri  
University of Louisville



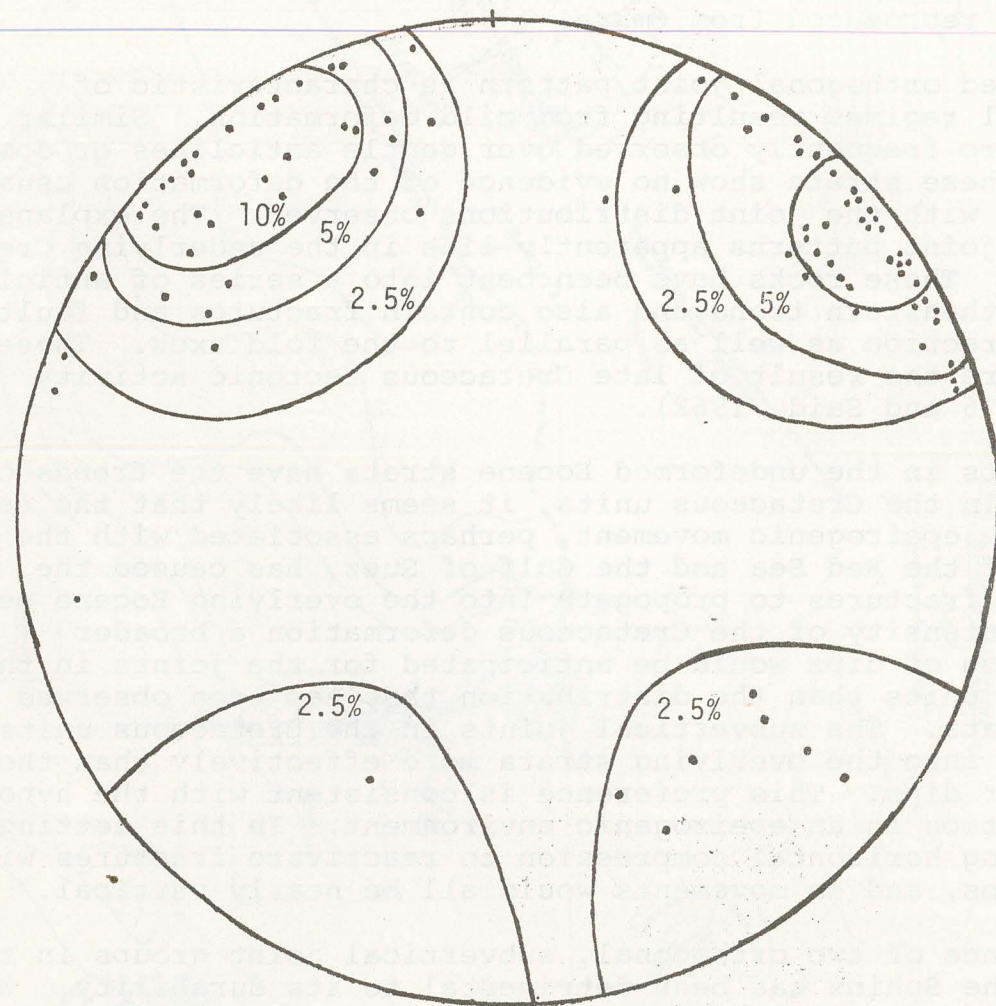


Fig. 5: Poles to joints and contours showing concentration.

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## REPORT ON THE 1978 SEASON AT KARNAK

This belated report intends to highlight some of the newly acquired materials gathered in the somewhat unavoidably abbreviated 1978 season and to describe the present status of the Tutankhamun-Ay shrine project at Karnak.<sup>1</sup>

### GOAL AND BACKGROUND

The basic goal of the project is the location and collection (in photos and drawings) of all the inscribed and decorated sandstone blocks of a temple of Tutankhamun and Ay which presumably came from within the second pylon of the temple of Amun at Karnak. Some blocks were noted in the days of Prisse and Lepsius, though the majority of them surely came to light during Chevrier's work on the second pylon.<sup>2</sup> Expecting only a score of blocks, only a month was set aside for the task in 1971. However, the tally rose quickly, reaching 76 blocks. Of that total, all were copied by hand and most were photographed. A preliminary report was later included in my dissertation (1977) and in that same year, ARCE became my benefactor and sponsored the 1978 season.

Though we arrived in Egypt in late June, our work at Karnak was delayed until early August because of new security procedures. Despite the shortened season, we managed pencil tracings of all the blocks photographed in 1971 and we added 40 more blocks to our total. At present, the count stands at 116 blocks with over 220 decorated surfaces.<sup>3</sup> Approximately 180 decorated surfaces are now available in pencil tracings though these were but hurriedly checked and require more attention.<sup>4</sup> Some of the fragments added to our survey late that season were only copied by hand and photographed. Not only has the number of fragments increased, but the scope of the Tutankhamun structures at Karnak is likewise becoming more complex, as we shall discuss below.

### ARCHITECTURAL ELEMENTS

On the basis of our materials from the 1971 season it appeared that the main Tutankhamun-Ay addition at Karnak was a modest pillared hall. Most of the blocks were architraves, with pillar fragments the next most numerous. In 1978, other elements became more readily recognizable, including more portions of the pillared hall and parts of other structures as well. Here is a breakdown of the various architectural features:

Feature	1971	1978	Total
architraves	54	10	64
pillars	13	4	17
wall (thin)	6	14	20
wall (thick)	0	9	9
wall (uncertain)	0	1	1
lintel	2	0	2
cornice	1	1	2
miscellaneous	0	1	1
	76	40	116

Though numerous, the architraves are primarily fragments of architraves. Only about 15 of them are virtually complete and measure between 190-229 centimeters in length. The "thin" wall fragments range in thickness from 66-74 cms. and are generally decorated on both sides. The "thick" wall fragments are irregularly shaped blocks (sometimes up to 150 cms. in thickness) which are decorated on but one side. These thick wall fragments apparently came from a heavy wall or gateway. Some may belong to the gateway of Tutankhamun, fragments of which were found in the ninth pylon by the late Ramadan Saad.<sup>5</sup>

### DECORATION

A few explanatory remarks must preface this section. The numbering of the individual blocks was strictly arbitrary, numbers usually being assigned at the time the hand-copy was made. Designations of the various decorated surfaces were somewhat less arbitrary. Architraves and wall fragments on which neither surface seemed to have priority were given "A" and "B" qualifications after the block number. If only one side was decorated, the block number usually stands alone. Architraves which have a single line of text on one side but a double line of text on the reverse are designated as sides "1" and "2" respectively. Pillar fragments' surfaces were arbitrarily numbered sides 1 through 4, though in cases where matching pieces have been found it may be convenient to alter some of these numberings for the final publication.

The decoration of the architraves and pillars is a reasonably fine sunken relief. The wall fragments are all in raised relief. On many of the blocks there are traces of the original coloring. Defacements of various types abound and will be considered in the next section.

The architraves (examples on Pls. I-IV) show some variation in their decoration. Some have a single line of text which is virtually identical on both sides. These are multicolored and contain the titulary of either Tutankhamun (24-B on Pl. I) or Aye (71-A on Pl. I) on both sides. Other architraves have the single-line text (Tutankhamun or Aye) on one side, but a double line of hieroglyphs on the reverse. Numbers 7 (Pl. 1) and 25 (Pl. II) and the series 67/1/2/28 (Pl. IV) illustrate both



surfaces of this type. The two-line text consists of yellow glyphs on a white background. The upper line is devoted to the titulary and dedicatory remarks of Ay, while the bottom line refers to Tutankhamun.

Tutankhamun's name (only the prenomen preceded by common royal titles) occurs in Ay's texts when Ay refers to him as "his son" (26-2, 27-2 on Pl. II; 52-2 on Pl. III; 9-2 on Pl. IV). These mentions of Ay's "son", Tutankhamun, are one of the more interesting aspects of the architrave inscriptions, though these obviously propagandistic references are surely not to be interpreted literally.<sup>6</sup>

Also significant among the architrave inscriptions are a number of references to the making of a temple or monument (26-2 on Pl. II; 8-1 on Pl. III; 9-2/11-2 and 15-1/22-1 on Pl. IV). In all the cases where the identity of the active figure is known, it is Ay who claims credit for the deed.<sup>7</sup> Of special relevance in this regard are the parallel statements such as those on blocks 9-2/11-2 (Pl. IV) wherein Ay claims to have made the temple for Tutankhamun, but the accompanying text merely cites Tutankhamun as a "builder of temples". In brief, the Ay texts tend to be rather specific while the Tutankhamun texts are rather of a more general nature. Despite the many fragments, there is not one instance wherein Tutankhamun claims to have made the monument for Ay. This supports our earlier conclusions that the pillared hall was built--or at least decorated--by Ay. It also diminishes any support for a Tutankhamun-Ay coregency which these blocks once fostered.<sup>8</sup>

The pillars are decorated in standard fashion with a hawk or a vulture hovering over the names and figure of the king. The king is accompanied by a god or (less often) a goddess. One side of a virtually complete pillar of Tutankhamun is illustrated on Pl. V, and some matching elements of two Ay pillars are presented on Pl. VI. Making some allowances for overlapping, the minimum height of the pillars may be estimated at ca. 2.8 to 2.9 meters, allowing a bit more for the area between the groundline of the representation and the actual floor level of the temple. There does not appear to have been any decoration below the groundline supporting the figures. The 17 pillar fragments represent parts of at least seven different pillars; two each for Tutankhamun and Ay and three of uncertain attribution.

Pillar fragment 54-2 (Pl. VI) has but one figure instead of the usual two. The other sides of that same pillar exhibit the customary king and deity combination. It appears that for some reason of style, one side of this Ay pillar along with one side of pillar fragment 105 (not illustrated) were treated to this change of decoration after the original scene had been cut.

The wall fragments include scenes which are fairly traditional but for the possible exception of the Tutankhamun funerary scenes (45-A on Pl. IX).<sup>9</sup> A fair number of blocks contain

military or hunting motifs (examples on Pl. VIII), though there were some fragments published many years ago which we were unable to locate.<sup>10</sup> Thin wall fragments depicting part of Kamutef and a goddess (81-A) and part of Ay and his royal ka (100-A) are illustrated on Pl. VII. On the latter, the ka name had been rubbed smooth and the figure of the king was ultimately hacked out. The Mut figure (94 on Pl. VII) is badly broken and it is uncertain if it is to be classified as a "thin" or "thick" wall fragment. Several large blocks depict Nile gods with their offerings (98 on Pl. VI, for example); these surely once formed part of a gateway, very likely the same one found by Saad.

In almost a score of cases we have matching or adjoining blocks. Several such examples amongst the architraves (Pl. IV) and pillars (Pls. V-VI) have been included in our illustrations. The longest continuous text comes from the matching of seven architrave fragments. Of the wall fragments, the pieces on Pl. VIII are not adjoining, but very likely they come from the same scene.

It is obvious from our illustrations that the blocks have suffered a great deal of damage. In part this was due to rough handling during the dismantling of the shrine and in the course of their reuse, with subsequent deterioration evident in some cases. In part, however, the deliberate defacements and alterations contribute significantly to their damaged condition.

#### DEFACEMENTS AND ALTERATIONS<sup>11</sup>

The deliberate defacements and alterations primarily fall into three broad categories: (1) careful erasures, leaving the surface of the stone smooth, (2) hacking out of names and figures of the kings, and (3) new texts or decorations, usually resulting from the reuse of the block. There are some special exceptions, but for our present purposes we will consider the three aforementioned categories and then briefly summarize Horemheb's role in the matter.

1. The careful erasure which leaves the surface smooth (obviously for reworking) is found almost exclusively with the names (Horus, Nebty, Golden Horus and cartouches) of Ay (7-1 and 7-2 on Pl. I; 25-2 on Pl. II; 12-1 on Pl. III; 1-2/2-2/28-2 on Pl. IV; 64-1 and 42-2 on Pl. VI; 100-A on Pl. VII). Apparently Horemheb had considered adding his own names as he did at Medinet Habu,<sup>12</sup> though there is no evidence that this was ever accomplished in either paint or sculpture. On several sides of an Ay pillar we find such careful erasures in the facial area of the king (33-4 on Pl. VI), suggesting that some alteration of the royal profile had been intended, though on two other sides of that same pillar the figure of the king was crudely hacked out. The careful removal of Ay's names was surely the first in the series of defacements.



2. The rough hacking out of names and figures was not as consistently carried out as was the rubbing out of Ay's names described above. With Tutankhamun cartouches we find the hacking out process rather superficial as on 60-4 (Pl. V, the prenomen), thorough but still identifiable as on 69-2 (Pl. III) and very thorough as on 9-2 (Pl. IV). Roughly 40% of the Tutankhamun cartouches are intact, usually on the architraves (24-B on Pl. I; 25-1 and 25-2 on Pl. II; 28-1, 28-2 and 15-1 on Pl. IV). The hacking out of figures is generally very thorough, though in one instance we find an intact figure of Tutankhamun (pillar on Pl. V).<sup>13</sup> Either the workmen were not very thorough or else new orders regarding the fate of the monument (its impending demolition) made it unnecessary to complete the task. It may be that once the decision had been made to remove the names and figures from the monument, the work may have been nearing completion in the more easily accessible portions of the shrine but may not have progressed very far on the architraves.

3. New decorations given an already decorated block most commonly involve post-Ay additions, several of which are illustrated here (24 and 53 on Pl. IX). There are several special cases in this category. No. 50 (Pl. III) contains a small text which is the ending of an Aton titulary ("[...]living] forever and ever") and the start of Akhenaton's ("King of Upper and Lower Egypt, Living in Truth [...]"). One other block (not illustrated) appears to have been an Akhenaton cornice which had been cut down and reused as an architrave in the Tutankhamun-Ay shrine. These are the only examples of the reuse of Akhenaton materials in our survey.<sup>14</sup>

One example of redecoration was alluded to earlier. In that case portions of one side of at least two different pillars were recut, eliminating the figures of the king and deity and replacing them with a more centrally positioned figure of the king alone. Little more than the uraeus of the god's image now remains on 54-2, though the accompanying legend overhead still retains mention of the deity on 64-1 (Pl. VI).

In summary, the nature and manner of many of the defacements are excellent indicators of the evolution of Horemheb's policy towards his two immediate predecessors. In Ay's case, the careful removal of his names from the shrine may have occurred relatively soon after Horemheb came to power. At that stage, Horemheb clearly intended to associate himself with "his" son, Tutankhamun, for surely Horemheb was aware of the filial references on the architraves. However, before Horemheb's names were added, he decided to disassociate himself from Tutankhamun as well. At that point the desecration of some of Tutankhamun's names and images and that of Ay's nameless figures took place. Before that process was completed, it was decided to raze the whole structure and use it as fill for the extensive construction projects which Horemheb initiated at Karnak.

# EXTENT OF THE TUTANKHAMUN STRUCTURES AT KARNAK

As indicated earlier, our initial concept of the Tutankhamun-Ay shrine at Karnak was limited to the pillared hall. We have already cited Saad's discovery of fragments of a Tutankhamun gateway in the ninth pylon and we have noted Redford's publication of some limestone talatat on which the names of Tutankhamun, Ay and Horemheb occur. More recently, Berlandini has added some new evidence regarding Tutankhamun's involvement with the dromos south of Karnak.<sup>15</sup> We will now consider some blocks which suggest yet another Tutankhamun structure within Karnak.

Late in the 1978 season my attention was repeatedly drawn to some blocks in Area E (cf. plan, Pl. IX) which exhibited certain similarities in style to the Ay scene and texts (usurped by Horemheb) atop the east wing, north face, of the second pylon of the Luxor Temple.<sup>16</sup> As one of the blocks in Area E had a Ramesses II cartouche (superimposed) it seemed there would be no relationship in any case to the Tutankhamun-Ay materials of the pillared hall and Saad's gateway, both monuments having been torn down during the reign of Horemheb. Upon closer inspection of the cartouche (106 detail on Pl. IX) one could easily read the Horemheb prenomen under the deeply incised prenomen of Ramesses II. But other traces indicate that at least Tutankhamun's name was also present. Though this block was given No. 106 in our survey, it cannot have come from either the pillared hall or Saad's gateway, but it was from a heavy wall or a second gateway which was intact and in use at least into the reign of Ramesses II. Several nearby blocks apparently belong to the same monument. Some work in this direction would surely be beneficial.

Briefly surveying the major constructions of Tutankhamun at Karnak we may cite the wall or gateway represented by our block No. 106 and its presently unnumbered kin, Saad's gateway, the pillared hall, a small limestone shrine (apparently built very early in the reign), some work on the dromos south of Karnak, some decoration on the east face of the east wall of the Cour de Cachette,<sup>17</sup> and the red granite colossi of Amun and Amonet.<sup>18</sup> As others have recently noted, Tutankhamun's claims to have restored the temples was no idle boast insofar as Karnak was concerned.

In a brief reign, Ay completed the pillared hall, usurped the Amonet colossus and appears to have added his name to the limestone shrine.

Horemheb went through the various stages outlined above with regard to the pillared hall before having it and the Saad gateway removed. The limestone shrine may have suffered a similar fate. With the remaining monuments, he merely usurped them. The end result was that he effectively removed from view



evidence of Tutankhamun and Ay at Karnak. At the very least, Horemheb's aim (in its final stage) was the elimination of all surface evidence of these two kings, especially in the Theban area.<sup>20</sup>

#### NAME OF THE TEMPLE

With the increase in the number of monuments, the attribution of the few extant names becomes more problematical. For now we shall merely cite the names and make a few observations.

The "Temple of Nebkheprure in Thebes" occurs on some pillar fragments (64-1 on Pl. VI, for example) and at the very least must be the name of the pillared hall, if not the entire monument from whence it came.

The "Temple of Nebkheprure" is known from an inscription of one Userhat from Deir el Bahari.<sup>21</sup> Userhat was a Scribe of Accounts in the Temple of Nebmaatire and also held some appointment (title lost) in the Temple of Nebkheprure. It is possible that his duties were limited to the west bank in conjunction with the mortuary temples of these two kings.

The "Temple of Nebkheprure" with the additional epithet "Beloved of Amun, Founder of Thebes" (albeit NOT within the hwt-sign) occurs on one of the gateway fragments from the ninth pylon.<sup>22</sup> Berlandini<sup>23</sup> discusses the possibility that this temple may be one and the same with the Temple of Nebkheprure in Thebes. This suggestion is enhanced by several factors which fit a plausible historical reconstruction. The gateway was clearly the work of Tutankhamun, with Ay appearing as a courtier. The inner portions of the temple (the pillared hall) may have been but in the early stages of construction at the time of Tutankhamun's death. Ay continued the work on the hall, using Tutankhamun's names and images but adding a fair amount of exposure of his own royalty. The pillared hall was eventually prepared to receive Horemheb's name in place of Ay's, but in the end, it was demolished along with the gateway. The removal of the hall and gateway may have constituted the elimination of an entire temple complex, while other Tutankhamun structures scattered throughout Karnak were subjected to usurpation.

#### LOCATION OF THE TEMPLE

Saad suggested that the Tutankhamun temple was situated in the area near the northwest corner of the Sacred Lake and in conjunction with the Tutankhamun relief on the east wall of the Cour de Cachette.<sup>24</sup> Without a sondage his theory cannot be confirmed or denied, but in any case the increase in our inventory of Tutankhamun structures indicates that there may have been a virtually complete temple complex and other structures located in various parts of the Karnak precinct.

#### LOCATION OF THE BLOCKS

The plan (Pl. IX) indicates the approximate locations of clusters or (in a few instances) solitary blocks. Those fragments included in our survey were given an "S" and number designation in green paint. The tally of pieces in each of these areas is as follows:

Area A - 52 blocks	Area F - 1 block(s)
B - 33	G - 2
C - 9	H - 2
D - 5	J - 1
E - 9	K - 1

The list above totals 115 blocks, with No. 116 safely residing in the Cairo Museum.<sup>25</sup> For clarification, Area H is atop the south wing of the second pylon and Area J is atop the south wall of the Hypostyle Hall where it joins the second pylon.

#### NOTES ON THE ILLUSTRATIONS

The drawings presented here still require some minor corrections and should therefore be considered as "interim" products. Inexpensive xerox reductions have been utilized, resulting in some inconsistency in the scale and in the intensity of the lines. Unless otherwise indicated, the architraves are at a very approximate 1:14 scale and the other fragments a 1:10 scale.

Shaded areas indicate the rubbing smooth of the surface. Hacked out areas are indicated by attempts at following the chisel markings. All damage to the stone is not shown as it would overly burden the observer.

#### FUTURE OF THE PROJECT

The most recent attempts to find funding have met with limited success. Some funds have been promised, but there is not a sufficient amount for the task remaining. At this writing there is yet one outstanding application; the hopes for a 1984 season rest thereon.

Otto J. Schaden

#### NOTES

1. Special thanks are due ARCE for their support of the 1978 season. It must also be noted that the Mission Permanente Française de Karnak has been a most gracious and helpful host during the several seasons.



In addition to the author, the 1978 staff consisted of Professor Charles F. Aling (assistant director and epigrapher), artists Mark Akgulian and James T. Putman, and our inspector, Abdel Hamid Marouf.

Reports on the project were presented at the ARCE meetings in Boston (1971), Philadelphia (1979), and most recently in Cleveland (1984). A written preliminary report, based on the work of the first season, may be found in my God's Father Ay (Ph.D. dissertation, University of Minnesota, 1977, unpublished), pp. 153ff. The thesis is presently available in the University Microfilm series, though a slightly revised version will be published in the reasonably near future.

2. Prisse, "Remarks on Ancient Materials of Some of the Propyla at Karnak", Transactions of the Royal Society of Literature (1st series) I (1843), 76ff. and 83ff. and LDT III, 15 (the text is also in URK IV, 2110). Most significant among Chevrier's "Rapports sur les travaux de Karnak" are those in ASAE XLIX (1949), 7-8 and pl. VIII; ASAE LII (1952), 229-242 and pl. I; and ASAE LIII (1955), 7-42 and pl. I. Listings of some of the Tutankhamun-Ay materials from the second pylon may be found in PM II<sub>2</sub>, 40-41.
3. Sizes of the blocks vary considerably, from the 2.29 meter-long architrave (71 on Pl. I) to small portable chunks (example, No. 52 on Pl. III).
4. For the drawings utilized in this report, it was necessary to make some corrections with the aid of the photo enlargements alone. Cf. section "Notes on the Illustrations" below.
5. Saad, "Fragments d'un monument de Toutankhamon retrouvés dans le IX<sup>e</sup> pylone de Karnak", Karnak V (1975), 93-109 and pls. XXXIV-XXXVI. The representation of a courtier on several of the blocks most likely represents Ay, cf. ibid., 94 (fig. 1) and 96 (fig. 3).
6. Without going into detail here, it should at least be noted that it is my belief that Akhenaton was the actual father of Tutankhamun, cf. my God's Father Ay, 147ff.
7. In addition to the blocks presented here, Ay as active figure also occurs on 14-1, 22-2, 19-2/29-2, 73-2 and most probably 115. One of the few cases wherein the name of the donor is lacking is No. 8-1 (Pl. III), which cites the monument as having been made for Amun.
8. Despite the admixture of the names of Tutankhamun and Ay there is no real evidence with which to support the coregency theory as outlined by Seele, "King Ay and the Close

of the Amarna Age", JNES XIV (1955), 177. Helck, "Das thebanische Grab 43", MDAIK XVII (1961), 108 and Murnane, Ancient Egyptian Coregencies (Chicago 1977), 179-181, are among those who have opposed the theory. My own objections are given in somewhat more detail in my God's Father Ay, 185-191.

9. In addition to the scene illustrated here, three other fragments (Nos. 38, 38-B and 103) probably belong to the same scene. No. 103 is included with a variety of materials in a photograph in Abdallah, "Rapport sur les travaux de Karnak et de la Haute Égypte", ASAE XLI (1942), 365 and pl. XXV.
10. Fragments 30, 31, 48-A, 79, 80-A, 80-B, 82, 85 and 116 involve military or hunting matters. Blocks previously published but not recently located include Prisse d'Avennes, Monuments Égyptiens (Paris 1847), pl. XI, no. 1 and Legrain, Le temple de Karnak (Brussels 1929), 135 (fig. 87). The inscription on the latter may be found in URK IV, 2049. No. 30 is published in Chevier, ASAE LIII, pl. I and 48-A may be found in ibid., pl. VII and also in Abdel Kader Mohammad, "The Administration of Syro-Palestine during the New Kingdom", ASAE LVII (1959), 132 and Pl. I, where it is apparently attributed (incorrectly) to the reign of Amenophis II.
11. Some comments on the defacements of the Tutankhamun materials at Karnak may be found in Saad, Karnak V, 108-109 and in my God's Father Ay, 182-185. As the Tutankhamun-Ay materials under discussion here come from Horemheb's pylons, the defacements can be safely attributed to Horemheb.
12. In the course of Horemheb's usurpation of Ay's mortuary temple (situated just north of Ramesses III's temple at Medinet Habu), his names were sometimes painted over the erased names of Ay, cf. Hölscher, Excavations at Medinet Habu II (Chicago 1939), pp. 76, 101-102.  
  
No. 71-A (Pl. I) shows the early stage of the erasure process, wherein the surface of the stone is broken up by means of a small-tipped chisel. In all of the other erasures of Ay's names illustrated in this report, the process has been carried out fully. No. 66 (not illustrated) has the Horus name of Ay intact, but only because the workmen took a shortcut: instead of the arduous task of chiseling and rubbing, they merely covered the name with plaster.
13. The other sides of that same pillar (Pl. V) have two instances in which the figure of the king was totally expunged (91-2 and 91-3), while the remaining side (91-4) has but the head, shoulders and parts of the arms defaced.

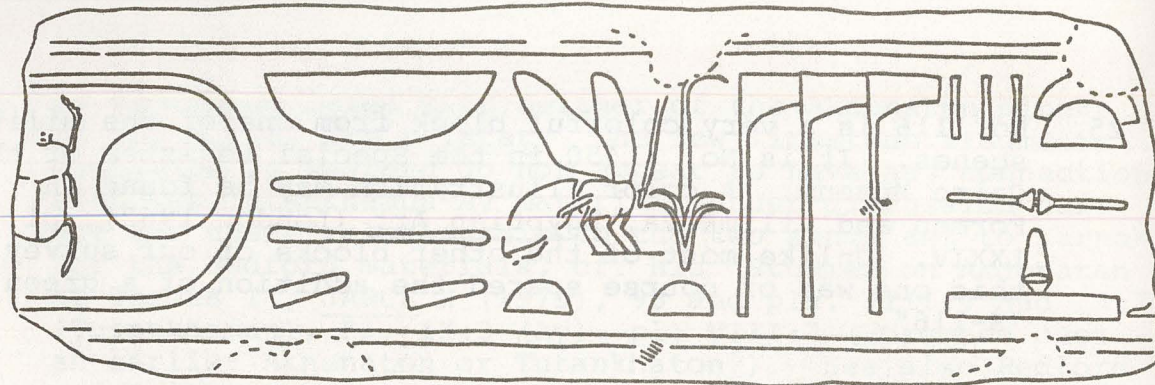


14. It should be noted that neither of the Akhenaton blocks in our survey are talatat. The few limestone fragments published by Redford do not appear to have any connection with the Tutankhamun-Ay materials under discussion here but for their relationship to the two kings and to Karnak. For the Redford materials, cf. his "Studies on Akhenaten at Thebes I", JARCE X (1973), 93 and pls. VIII:4 and IX:7 (Tutankhamun), Pl. IX:3 (Ay), pl. VIII:7 (Horemheb over an earlier Akhenaten or Tutankhaton?). See also Redford and Smith, Akhenaten Temple Project I (Warminster 1976), pl. LXXXIV:2 (a possible Tutankhamun reuse of an Akhenaten talatat?). The few examples of the reuse of Akhenaten blocks will warrant special consideration in our final report.
15. Berlandini, "Un dromos de Toutankhamon au X<sup>e</sup> pylone de Karnak", Karnak VI (1980), 247-260 and pls. LVI-LXI.
16. This scene in the Luxor Temple will be published by the Epigraphic Survey of the Oriental Institute.
17. PM II<sup>2</sup>, 132 and Saad, Karnak V, 105 and pl. XXXVI.
18. PM II<sup>2</sup>, 90. Cf. also Schaden, "The Granite Colossi of Amun and Amonet at Karnak", GM XXXVIII (1980), 69-73.
19. Berlandini, Karnak VI, 259-260 and Eaton-Krauss, "Tutanchamun als Jäger", GM LXI (1983), 50.
20. The tomb of Tutankhamun (hidden away and out of sight) was allowed to remain unmolested, though Ay's tomb was eventually desecrated. Horemheb cannot be proven to have been directly involved with the desecration of Ay's tomb, though it remains a possibility (cf. my God's Father Ay, 250ff. and 281ff.).
21. URK IV, 2076-2077.
22. Saad, Karnak V, 95 (fig. 2).
23. Karnak VI, 259.
24. Karnak V, 105ff. and likewise Berlandini, Karnak VI, 259. The only in situ Tutankhamun work within the Amun precinct at Karnak is the scene on the east wall of the Cour de Cachette. Some attention should be given the remainder of the wall to determine whether or not it had ever been decorated. The possibility that our block 106 (cf. section "Extent of Tutankhamun Structures at Karnak" above) may have come from this area crossed my mind, but the lack of any other decoration on the walls of the Cour de Cachette and the fact the Ramesses II did not usurp the scene leads me to conclude that 106 was from a different structure.

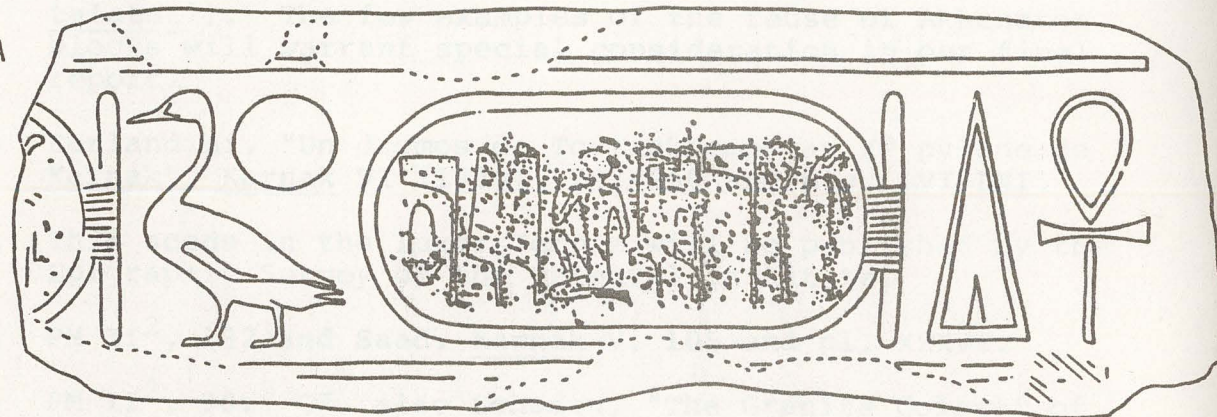
25. No. 116 is a very colorful block from one of the military scenes. It is No. 11450 in the Special Register of the Cairo Museum. A color illustration may be found in Forman and Vilimkova, Egyptian Art (London 1962), pl. LXXIV. Unlike most of the other blocks of our survey, this one was of course spared the addition of a green "S-116".



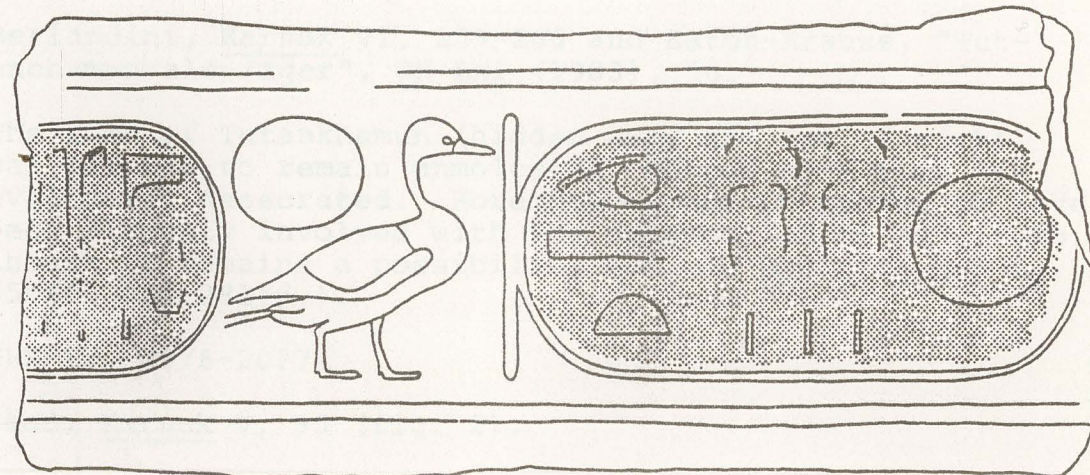
24-B



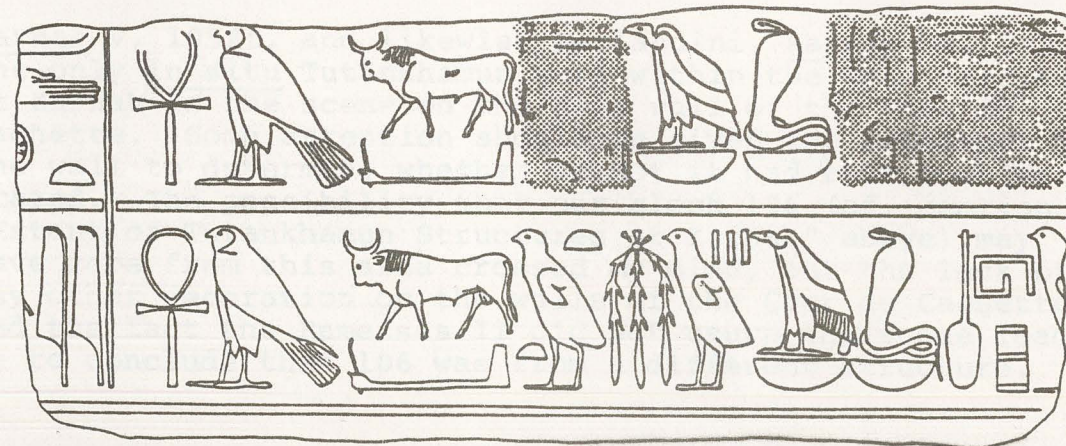
71-A



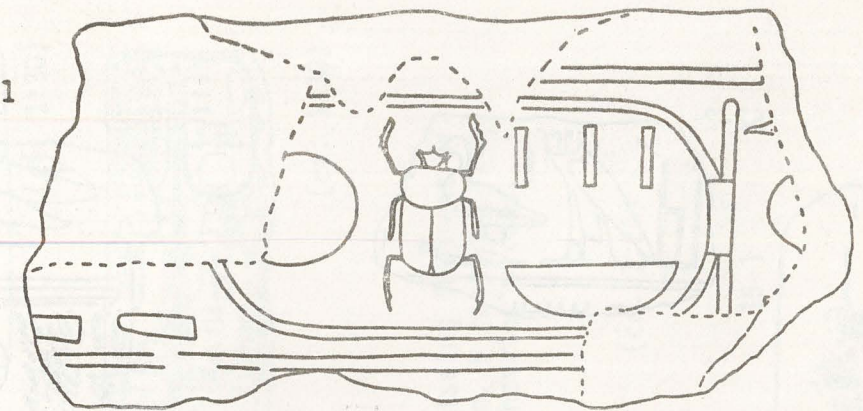
7-1



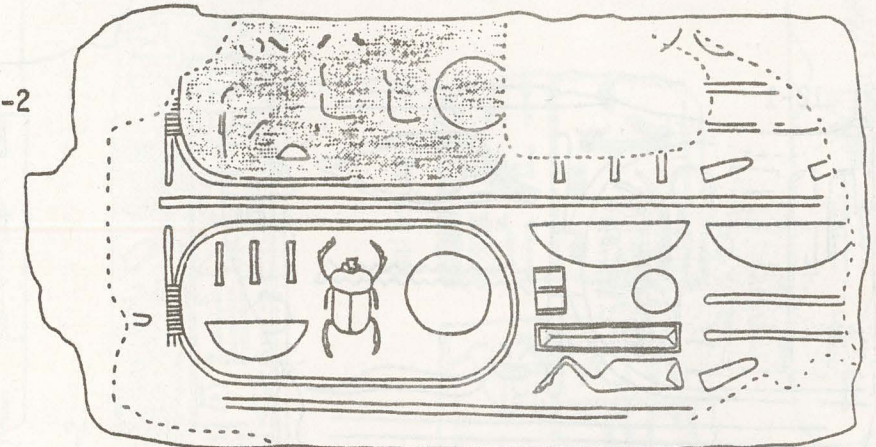
7-2



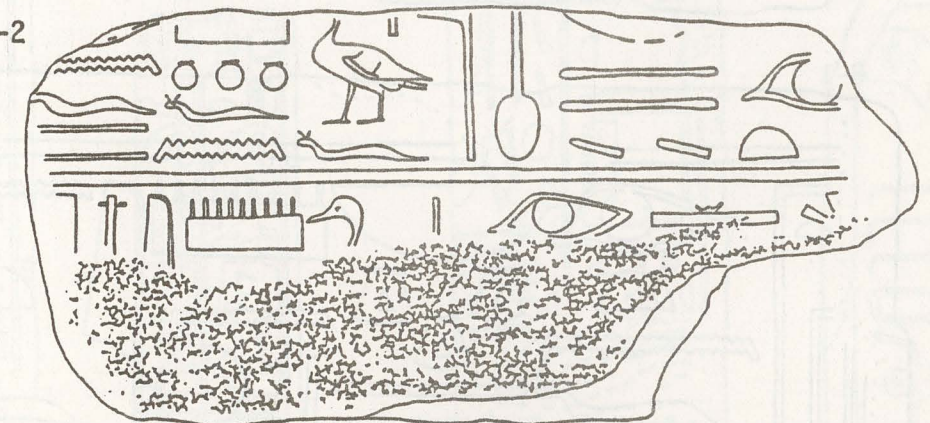
25-1



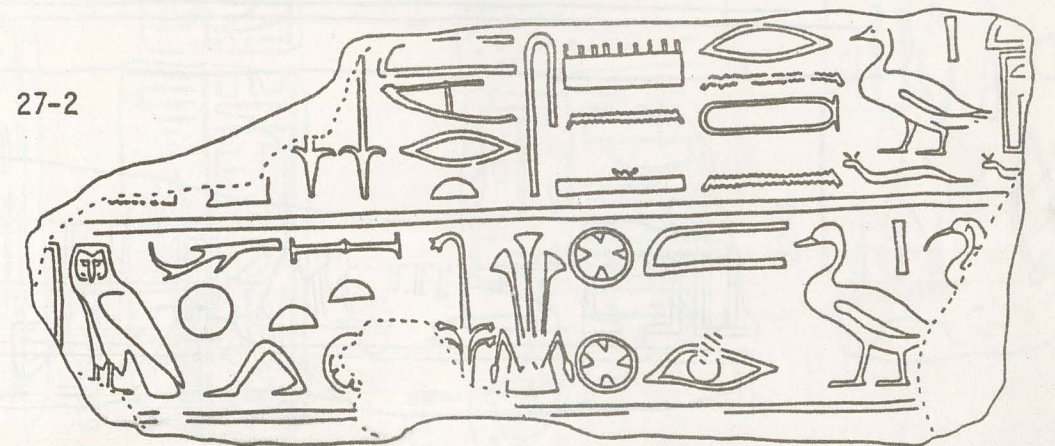
25-2



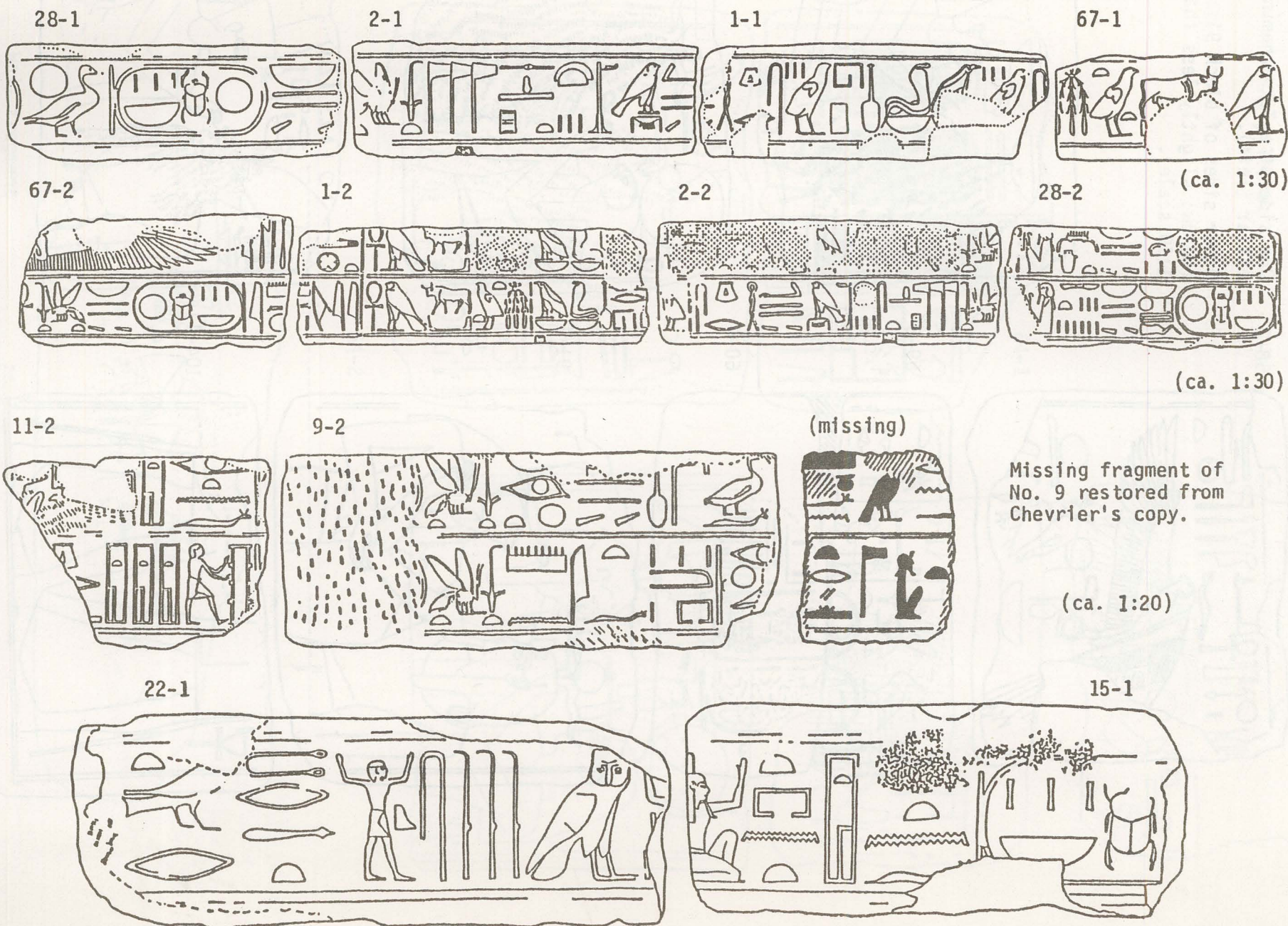
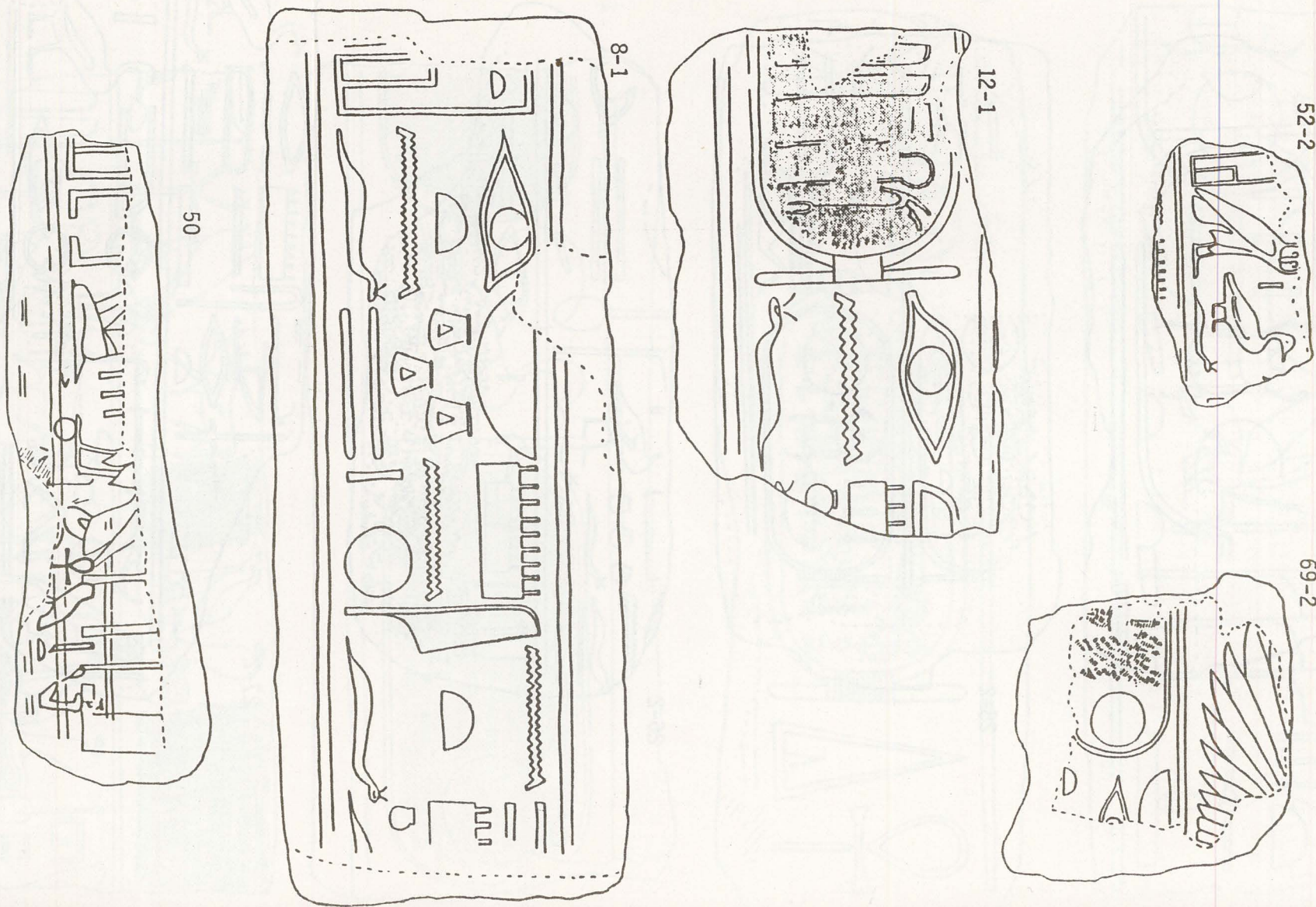
26-2



27-2









-60-

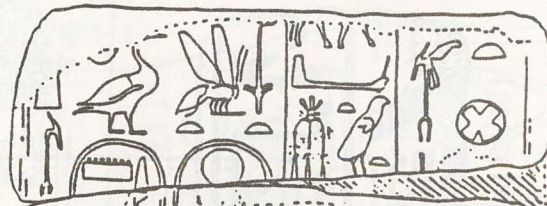
58-2

One side of a Tutankhamun pillar (left).

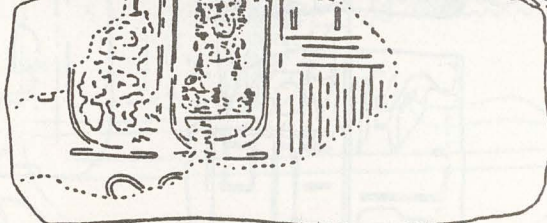
Other sides of block 91 (below; slightly less than 1:10 scale).



59-3



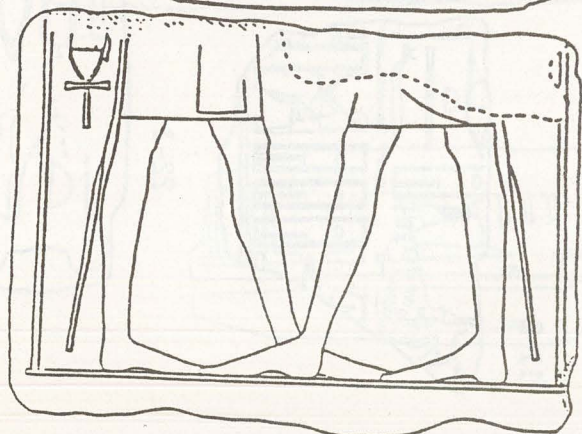
60-4



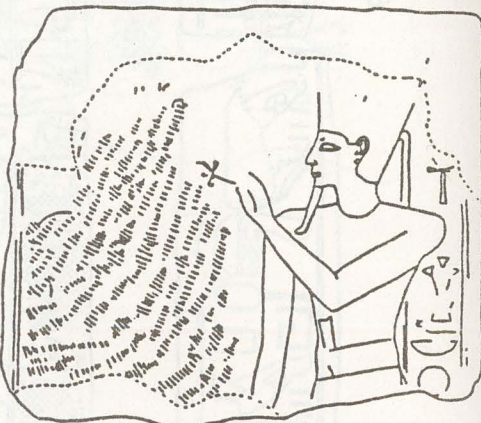
91-1



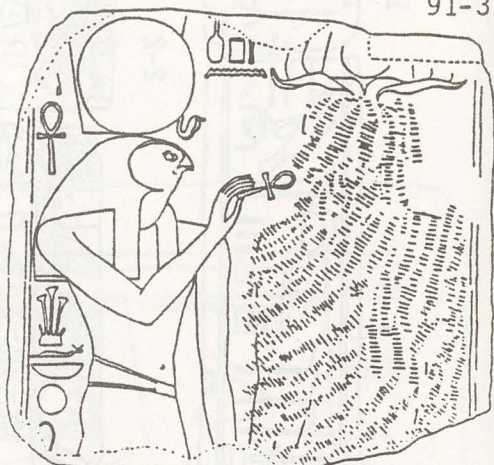
104-4



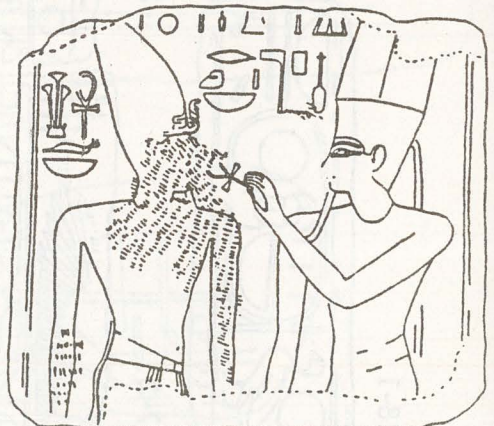
91-2



91-3



91-4



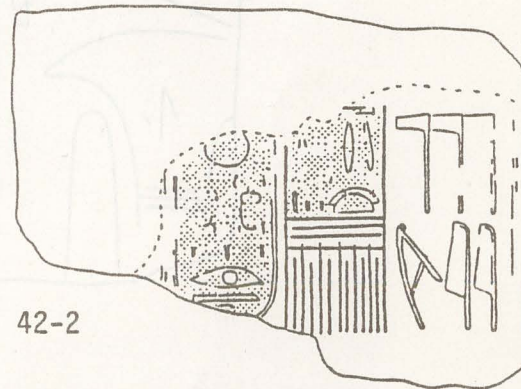
-61- 63-4

Ay pillars:

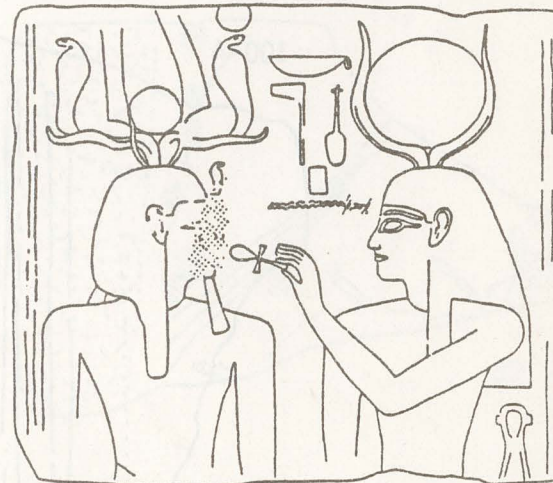
64-1



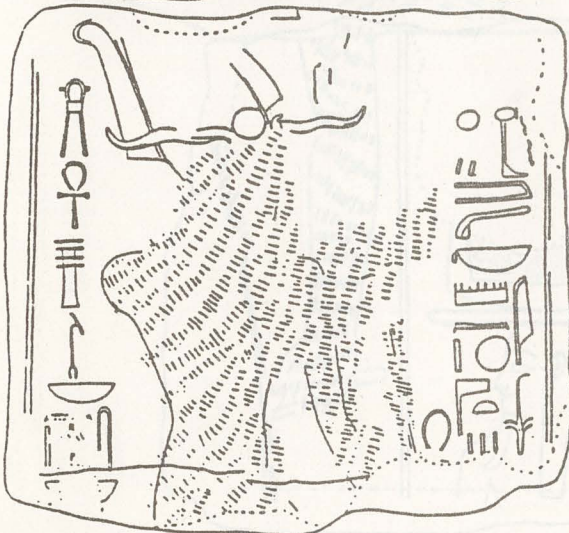
42-2



33-4



54-2



98



Wall fragment

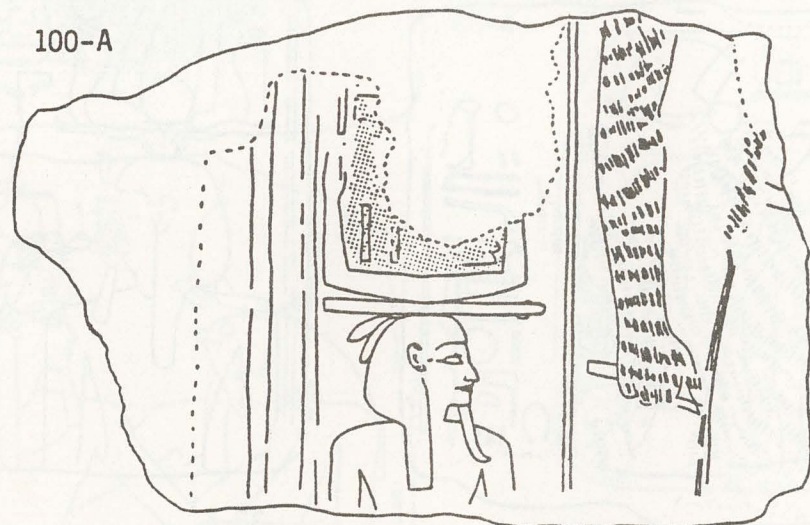
25cm



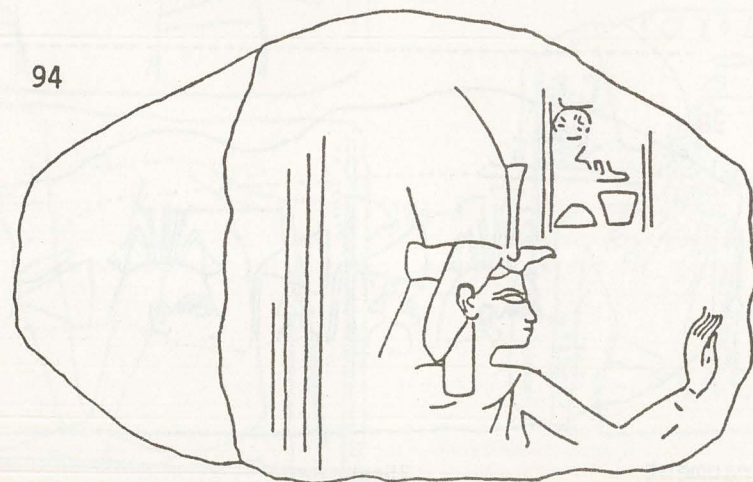
81-A



100-A



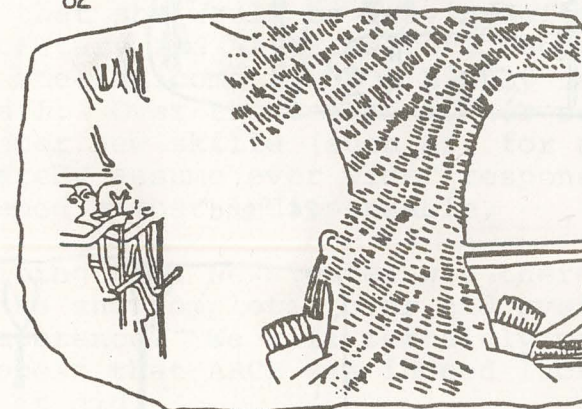
94



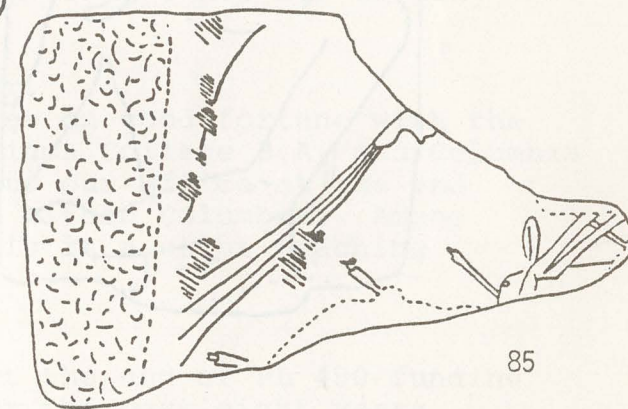
80-B



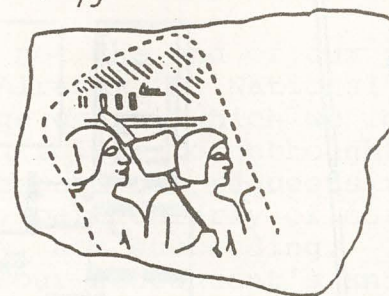
82



85



79



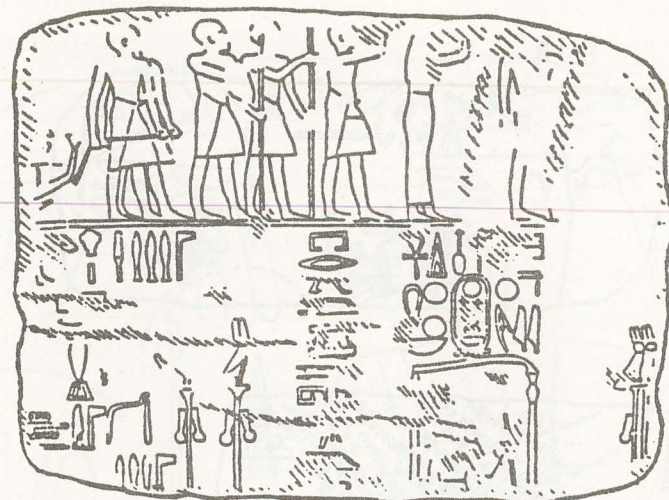
31



20 cm



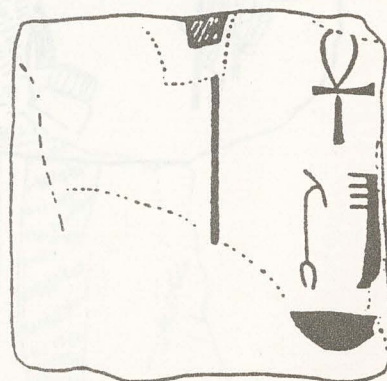
45-A



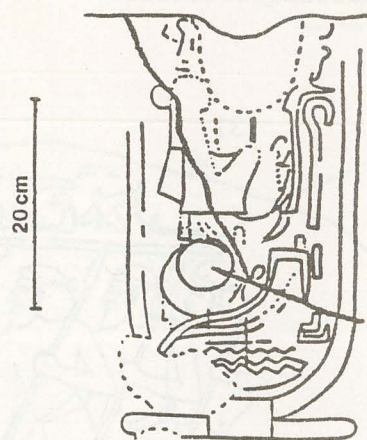
53 "end"



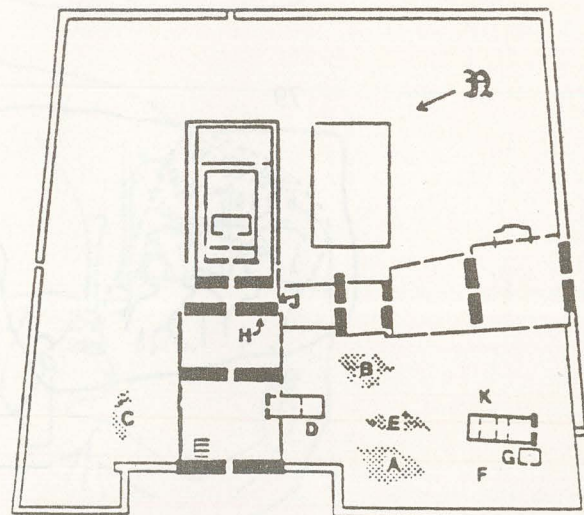
24 "end"



106 - detail



Karnak plan: present locations  
of the Tutankhamun-Ay blocks.



## NOTES FROM THE EXECUTIVE DIRECTOR

### Teresa Indiveri Leaves.

Towards the end of this past July, Terry Indiveri notified us that she would be leaving after nearly four years as secretary and NARCE editor. We all must regret this deeply as she had come to be a highly valued member of our U.S. staff. Over the length of her service Terry never ceased to master new skills (such as, for example, bookkeeping) and thereby assume ever wider responsibilities until her services seemed almost indispensable.

Editing this Newsletter was therefore but one of the many tasks she completed over and over again with care and competence. We will certainly miss her, noting in the process that ARCE was indeed lucky to have her for as long as it did.

### Shirley Bé is the New NARCE Editor.

In Terry's place we once again drew on good fortune with the acquisition of Shirley Bé, a Williams College B.A. and Columbia Teachers College M.A., who moved to our office at the end of August from a similar position within Columbia. Among Shirley's extensive foreign travels is a stint teaching English in Saudi Arabia.

### Fund Raising.

Members will have heard me predict the end of PL 480 funding on a whole range of occasions over the past eight years. Finally, despite reprieve after reprieve, this is really the last year and next summer the budgetary crunch will actually begin. By July 1st the Cairo Center, our fellowship program and the Epigraphic Survey (Chicago House) will no longer be using Egyptian pounds supplied by this program, except a few small residual sums from incomplete expenditures.

This is not the end of our programs, however, as it might have been. Already the National Endowment for the Humanities challenge grant, which we obtained in 1983, has forced us to apply ourselves to unthought-of areas of potential support and to expand our requests to other older sources. The new efforts, particularly of our Assistant Director for Development Dr. Lane, are succeeding. It is a distinct pleasure this year to read our accountant's annual audited report which shows a non-Egyptian pound income of \$298,000, not counting receipts purely for individual projects or fellowships.



Beyond this good news there are promising signs in Washington that either the U.S. Information Agency or the Smithsonian Institution will find a way to ease the burdens caused by the loss of PL 480 through new direct contributions of appropriated monies.

Meanwhile we are hoping to rely to a certain extent on the continued generosity of individual members. This is essential, particularly if we are to satisfactorily complete the NEH challenge grant. One useful way you can contribute (somewhat painlessly) is to donate your used, or seldom used, books to our Cairo Center library. Almost any work about Egypt has value in this situation. If we already happen to have those you give, May Trad, our extremely capable person-in-charge, will simply trade them for something we do not have. Please therefore take a few minutes to weed out your own collections and send the extras and unwanted items to Cairo, either via us here in New York or directly.

#### Should We Change ARCE's Name?

President Robert Fernea has discussed with some of us recently the appropriateness of being named the "American Research Center in Egypt." He has asked me accordingly to bring up this topic for the general comment of all individual members who may wish to express opinions on the matter.

The problem presents itself in the following manner: our organization is now much more than simply one "center" in Cairo, Egypt. We are, or have become, a professional society or association which operates a Cairo Center as only one of its activities. Should our name reflect this? If so, rather than use the term "center", we might call ourselves "The American Association for Egyptian Research" or "The American Society for Egyptian Studies." These are, of course, only suggestions at this point.

## ANNOUNCEMENTS..

### Center for Arabic Study Abroad CASA

#### - Fellowship Announcement -

The Center for Arabic Study Abroad (CASA) offers a limited number of fellowships for Arabic language study at the American University in Cairo to graduate and upper-division undergraduate students committed to a career in Near Eastern Studies. Successful applicants must be U.S. citizens, have had at least two years of Arabic language study, be enrolled in an academic program of an accredited university or college or be a professor thereof for the duration of the program, have attained a degree of scholarly and emotional stability sufficient to enable full participation in intensive Arabic language study abroad, and must pass an oral and written exam which will be given to all applicants at a school in their locality on February 8, 1985.

Three programs are available: 1) a two-month summer institute concentrating on colloquial Egyptian Arabic, 2) a full-year program including colloquial but emphasizing literary Arabic (limited to enrolled graduate students and professors), 3) and a summer refresher course for professors of history and social sciences (exempt from selection exam) whose specialities focus on the period 1700 to the present, emphasizing archival and documentary Arabic, but also including work on modern standard Arabic both aural/oral and written.

For more information, contact: Connie Jordan, Program Assistant, Center for Arabic Study Abroad, M29C Denny Hall, DH-20, University of Washington, Seattle, Washington 98195, or your local Arabic or Middle East Studies Department.

Deadline: January 1, 1985.



AKHENATEN AND NEFERTITI

The catalogue of the important exhibition shown in Brooklyn and Detroit in 1973-74. Written by Cyril Aldred and produced by the Egyptian Department, Brooklyn Museum, this work has been generally unavailable for several years. A small supply was discovered recently which is being made available to the readers of the ARCE Newsletter. A valuable reference for Egyptologists, it is 231 pages long with 47 text figures, 8 color plates and 175 illustrated catalogue entries. Aldred's introductory material contains a general discussion of the Amarna revolution, a historical outline, a discussion of the monuments of Akhenaten and Nefertiti, the development of the Amarna style in its early and late phases, as well as comments on the iconography and character of Amarna art. The version available is in paperback. Please use the form below or a photocopy and please note that there is a two dollar shipping charge.

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